Sept. 22, 1959 H. RIENER 2,905,357

CONTAINER

Filed June 24, 1957

FIG. 1

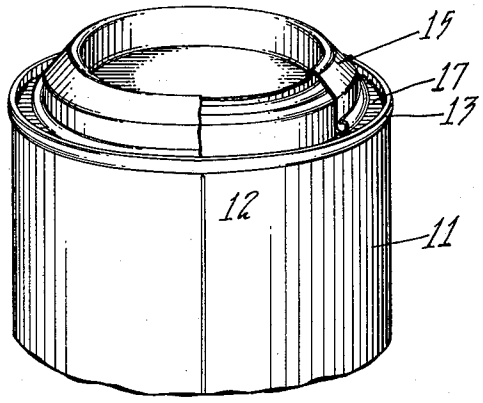
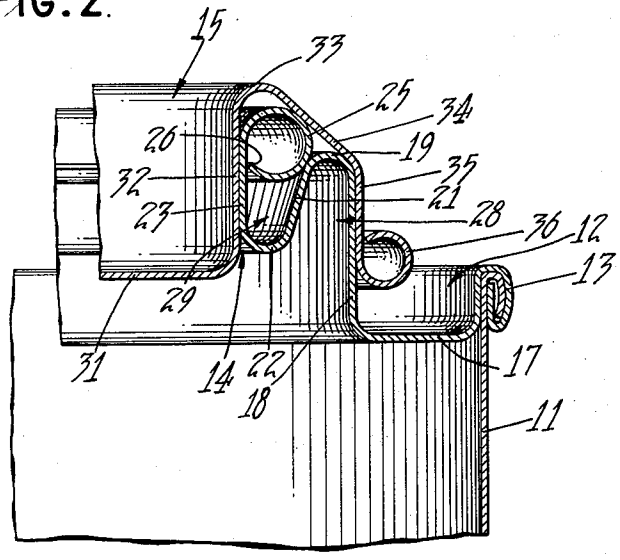


FIG. 2



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CONTAINER

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3 Claims. (Cl. 220—42)

The present invention relates to sheet metal cans or containers and has particular reference to an improved friction ring structure for containers adapted to be sealed with friction plug covers.

An object of the instant invention is the provision of a container having a cover friction sealing ring which is sturdy and rigid enough to resist without deformation excessive abuses incurred during shipment and other handling of the container.

Another object is the provision of such a container wherein exposed raw edges of the friction ring are shielded against contact with the products of the container so that such containers may be readily utilized for shipping corrosive products.

Another object is the provision of such a container wherein the friction ring is constructed to eliminate all pockets adjacent the sealing faces of the ring so as to prevent the collection adjacent these faces of residual portions of the container contents during dispensing thereof and thereby maintain the sealing faces clean for reclosing of the container.

Another object is the provision of such a container having a friction ring in which a double sealing face is provided for the cover and wherein the faces are components defining reversely disposed U-shaped channels having a common angularly disposed separating wall section which reenforces and rigidifies the ring against distortion.

Another object is the provision of such a friction ring which can be readily manufactured at high speed rates of production and on an economical basis.

Numerous other objects and advantages of the invention will be apparent as it is better understood from the following description, which, taken in connection with the accompanying drawings, discloses a preferred embodiment thereof.

Referring to the drawings:

Figure 1 is a perspective view of the upper end of a sealed sheet metal container embodying the instant invention; and

Fig. 2 is an enlarged fragmentary vertical sectional view of the container shown in Fig. 1.

As a preferred and exemplary embodiment of the instant invention the drawings disclose a friction cover sheet metal can or container utilized for the shipment of corrosive products such as water base paints and the like which corrosively attack raw unprotected edges of any portion of the container, especially those left exposed adjacent the mouth of the container. In the instant invention such raw edges are shielded against contact with the product.

The container illustrated in the drawings comprises a tubular cylindrical body 11 having a sheet metal friction ring 12 secured to the upper end thereof in a suitable end seam 13, preferably of the well known double seam type, the friction ring 12 defining a product dispensing mouth 14 sealed by a removable sheet metal friction plug cover 15.

The friction ring 12, adjacent the end seam 13 preferably is formed with a countersunk horizontal panel 17 which inwardly of the end seam merges into a straight upright annular friction wall section 18 which extends above the panel 17 and above the end seam as shown in Fig. 2. At its upper end the friction wall section 18 merges into an inwardly and downwardly curved short annular wall section 19 which continues as an inwardly and downwardly extending straight angularly disposed annular wall section 21 which preferably at a level just above the end seam 13 merges into an inwardly and upwardly extending short curved annular wall section 22. The curved wall section 22 merges into a straight upright annular friction wall section 23 which is spaced laterally inwardly from the friction wall section 18 and which preferably is parallel thereto. The friction wall section 23 defines the mouth 14 of the container. This wall section 23 preferably extends above the upper end of the friction wall 18 and at its upper end merges into an outwardly and downwardly projecting hollow edge curl 25 which terminates in a raw edge 26 preferably disposed adjacent the outer face of the friction wall section 23. The edge curl 25 preferably engages against the angularly disposed wall section 21 or the curved wall section 19 or the point of merging of the two wall sections as desired.

Thus the two laterally spaced and connected annular wall sections 18, 23 constitute outer and inner friction seat walls respectively, which together with the curved wall sections 19, 22 define a pair of reversely disposed U-shaped annular channels 28, 29 having the common defining or separating wall section 21 which serves as a reenforcing member between the friction seat walls 18, 23 to produce a short height, rigid sturdy friction ring structure which readily resists deformation by abuse incurred during shipment and other handling of the container. With the edge curl 25 engaging against the wall section 21 adjacent the curved wall section 19, the ring is further reenforced to impart considerable rigidity to the ring. In this relation of the edge curl 25 to the other components of the ring, all pockets which could collect residual portions of the container contents during dispensing is eliminated, and the raw terminal edge of the edge curl, being disposed between the inner friction seat wall 23 and the curved wall section 19, is shielded against contact with the container products and is thereby protected against corrosion. If desired, the edge curl 25 need not be an entirely closed curl as shown but may be partially open with its raw terminal edge disposed anywhere between the inner friction seat wall 23 and the curved wall section 19.

The friction plug cover 15 which seals the mouth 14 of the container, preferably is formed with a countersunk panel wall 31 which is disposed in the mouth of the container and which is surrounded by an upright friction sealing wall section 32 which extends upwardly along the inner friction seat wall 23 of the ring 12 in frictional sealing contact therewith. At its upper end, the sealing wall section 32 merges into an outwardly and downwardly extending short curved annular wall section 33 which continues outwardly and downwardly as an angularly disposed annular wall section 34 which overlies and preferably but not necessarily engages against the edge curl 25 and the curved wall section 19 of the ring 12 as shown in Fig. 2. Adjacent the curved wall section 19 of the friction ring 12, the angularly disposed wall section 34 merges into a depending annular skirt wall section 35 which extends along the outer friction seat wall 18 of the friction ring 12 in frictional sealing contact therewith. The skirt wall section 35, adjacent the ring panel 17, merges into and terminates in an outwardly, upwardly and inwardly curved edge curl 36 which provides a smooth terminal edge for the cover.

It is thought that the invention and many of its attendant advantages will be understood from the foregoing description, and it will be apparent that various changes may be made in the form, construction and arrangement of the parts without departing from the spirit and scope of the invention or sacrificing all of its material advantages, the form hereinbefore described being merely a preferred embodiment thereof.

I claim:

1. A sheet metal container for corrosive products, comprising a cylindrical body having a friction ring secured thereto in an end seam, said ring including a pair of laterally spaced and parallel outer and inner straight friction seat walls connected by an inclined annular wall terminating at its opposite ends respectively in outwardly and inwardly curved annular walls, the upper end of said inner straight friction seat wall merging radially outwardly into a smooth annular hollow curl terminating in a raw edge and engaging against the upper end of said inclined annular connecting wall to protect said raw edge from corrosive contact with the container contents, and a closing cover having a pair of annular connected spaced and parallel inner and outer straight friction walls for respective sealing engagement against said inner and outer friction seat walls to seal the container.

2. A sheet metal container for corrosive products, comprising a cylindrical body having a friction ring secured thereto in an end seam, said ring including a pair of laterally spaced and parallel outer and inner straight friction seat walls connected by an inclined annular wall

terminating at its opposite ends respectively in outwardly and inwardly curved annular walls to define with said friction seat walls a pair of laterally and vertically spaced annular reenforcing channels of substantial U shape, the upper end of said inner straight friction seat wall merging radially outwardly into a smooth annular hollow curl terminating in a raw edge and engaging against the upper end of said inclined annular connecting wall to close the innermost of said channels and thus protect said raw edge from corrosive contact with the container contents, and a closing cover having a pair of annular connected spaced and parallel inner and outer straight friction walls for respective sealing engagement against said inner and outer friction seat walls to seal the container.

3. The container of claim 2, wherein said cover friction walls are connected by an outwardly and downwardly inclined annular wall engageable against said edge curl to hold the same in channel closing position against the upper end of said inclined annular friction seat connecting wall of said friction ring.

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