

May 23, 1933.

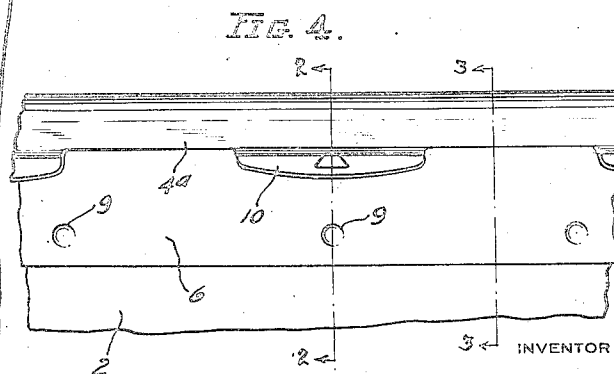
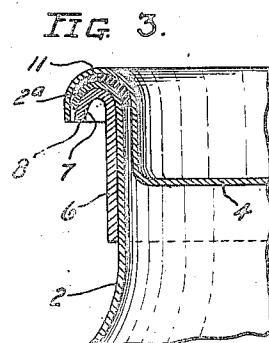
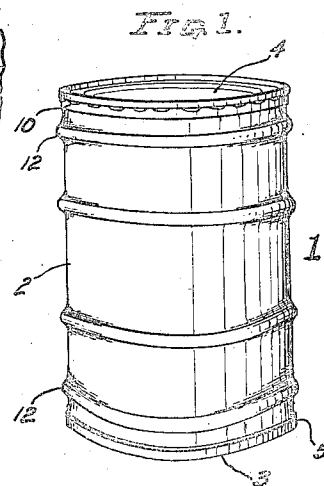
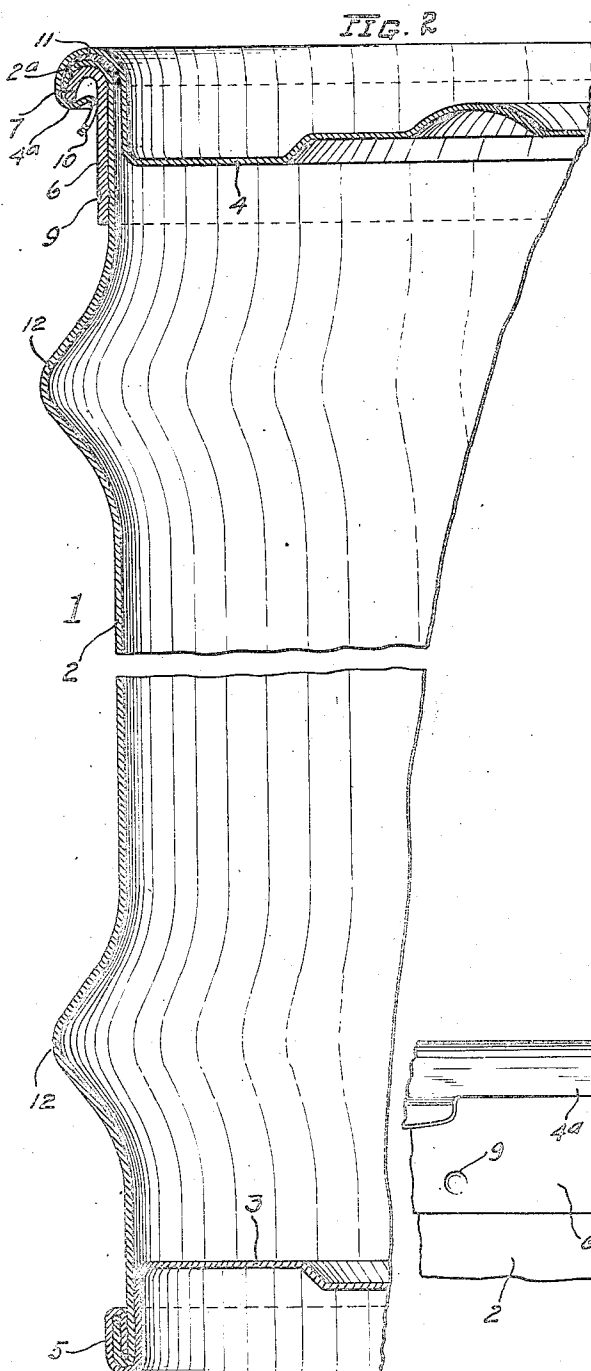
H. F. COURTRIGHT

1,910,426

CONTAINER

Filed March 17, 1930

2 Sheets-Sheet 1



BY

Harry F. Courtright
Geo. A. Pitts

ATTORNEY

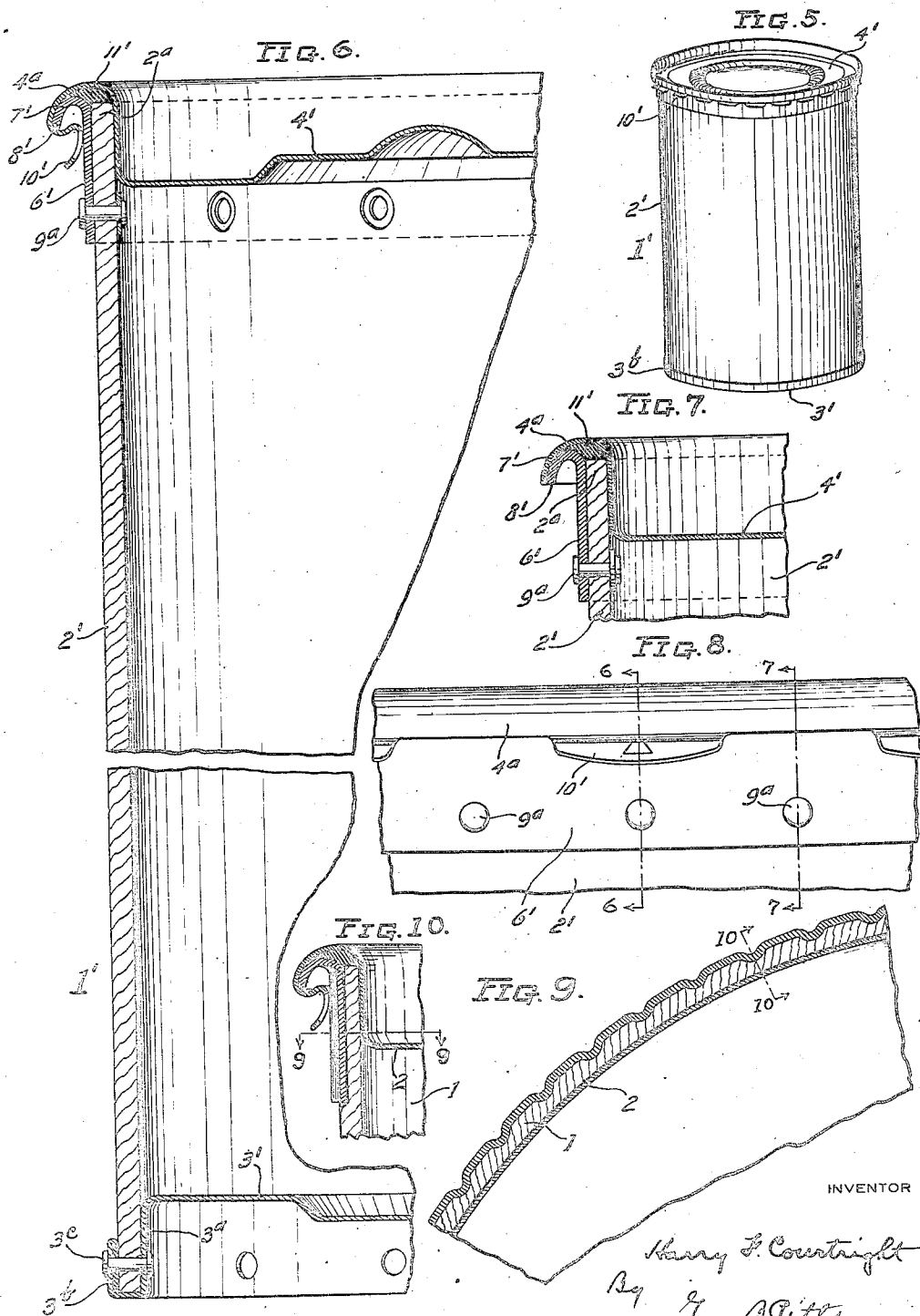
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2 Sheets-Sheet 2



INVENTOR

Harry F. Courtright
By Geo. A. Pitts

ATTORNEY

UNITED STATES PATENT OFFICE

HARRY F. COURTRIGHT, OF CLEVELAND, OHIO, ASSIGNOR TO THE CLEVELAND STEEL BARREL COMPANY, OF CLEVELAND, OHIO, A CORPORATION OF OHIO

CONTAINER

Application filed March 17, 1930. Serial No. 436,446.

This invention relates to a container, more particularly a container of the open top type having a clamped on cover. The invention may be applied to containers such as cans, pails, drums and barrels of various types and sizes, and these various containers may be formed of sheet metal, fibre or wood or a combination of these materials.

One object of the invention is to provide a container of this type in which a reinforcement is incorporated in the container side wall to insure adequate locking of the cover and container body together, while permitting the container body or cover or both to be formed from relatively thin sheet metal, fiber or wood.

Another object of the invention is to provide an open top container, one end portion of which is circumferentially reinforced to form a wall capable of resisting the force required to hold the cover in position with the gasket therefor compressed in sealing relation while or until the wings or tabs of the cover are bent into locking position.

Another object of the invention is to provide, in a container of the type referred to, an attachment for the upper end of the container exposed below the rolled over edge thereof and arranged to form a free terminating shoulder or wall around which the wings or tabs of the cover are bent, whereby the cover and the container body are rigidly secured together.

A further object of the invention is to construct a container of the open top type in which is provided (a) a reinforcement for one end of the container body to insure adequate sealing and locking of the cover thereon and (b) a guard, incorporated in the wall of the container body, to protect the sealing and locking elements during handling.

Other objects of the invention will be apparent to those skilled in the art to which my invention relates from the following description taken in connection with the accompanying drawings, wherein

Fig. 1 is a perspective view of a container formed of sheet metal embodying my invention, as applied to steel.

Fig. 2 is a fragmentary section of the con-

tainer, the upper portion being a section on the line 2—2 of Fig. 4.

Fig. 3 is a fragmentary section on the line 3—3 of Fig. 4.

Fig. 4 is a fragmentary side elevation.

Fig. 5 is a perspective view of a container embodying my invention, but having side or body walls formed of wood or fibre.

Fig. 6 is a fragmentary section of the container shown in Fig. 5, the upper portion being a section on the line 6—6 of Fig. 8.

Fig. 7 is a fragmentary section on the line 7—7 of Fig. 8.

Fig. 8 is a fragmentary side elevation of the container shown in Figs. 5 and 6.

Fig. 9 is a fragmentary section on the line 9—9 of Fig. 10 of a container wherein the attachment or reinforcement is secured in position by crimping.

Fig. 10 is a section on the line 10—10 of Fig. 9.

The container embodying my invention may be formed entirely from sheet metal, or portions thereof, for example, its side walls, may be formed from fibre or wood.

Referring to Figs. 1 to 4, inclusive, 1 indicates as an entirety a container comprising a body 2, a bottom 3 and a top or cover 4, each of these parts in this illustrated construction being formed from sheet steel. The bottom 3 may be secured in a liquid and air tight manner to the lower end of the body 2 in any suitable manner, that shown comprising the conventional double seam 5.

The upper end of the body 1 is provided with an attachment which is constructed and arranged to insure adequate or positive locking and sealing, as well as a reinforcement. The attachment preferably comprising a relatively wide metallic band or ring 6 formed of relatively thick gage material and having at its upper edge a bead 7 that, in cross section, is less than a complete circle, whereby is provided a rigid shoulder 8 in spaced, fixed relation to the main portion of the ring, where the ring is applied exteriorly of the body 1, or the body 1 where the ring is disposed interiorly of the container. The main portion of the ring is secured to the body 1 by spot welding, as shown at 9.

I prefer to mount the attachment 6 exteriorly of the container, as shown, as this omits the formation of an annular shoulder on the inner wall thereof. The circumferential marginal portion of the body 2 may be readily rolled to fit over the bead 7 of the reinforcement in which arrangement sealing of the container is more effectively insured; also, the space within the bead of the attachment is left free to receive the bent over wings or tabs 10 of the cover 4. As shown, the marginal portion 2a of the body 1 is rolled to form a bead that conforms to the bead 7, so as to be in face to face relation thereto, but preferably terminates inwardly of the shoulder 8 to leave the latter exposed, whereby the bead portion 4a of the cover 4 may be bent inwardly into direct engagement therewith and the wings or tabs tucked into the space behind or within the shoulder. The wings or tabs 10 are preferably uniformly spaced around the bead portion 4a of the cover and are bent inwardly at substantially right angles around the terminating shoulder of the bead 7 and substantially into engagement with the outer surface of the ring 6, their free edges flaring outwardly to permit their engagement with a tool to bend them outwardly when it is desired to remove the cover 4; also, each wing may be provided with an opening to receive a tool, which may be utilized to bend the wings outwardly.

To position the cover and lock or clamp it in position, I prefer to use a machine or tool of the construction disclosed in the application of Anthony Schroeder, deceased, filed August 21, 1929, Serial No. 387,458.

In positioning the cover, I prefer to interpose a suitable gasket 11 between the bead 2a and bead portion 4a. The attachment is (a) arranged to withstand the pressure required to compress the gasket into effective sealing relation during the bending of the tabs into locking relation with the shoulder 8 without undue strain on the container wall and (b) capable of holding the cover in sealed relation.

12 indicates an annular bead provided on the body 1 in close relation to the ring 6 and adapted to serve as a guard for the beads and wings or tabs during handling of the container.

By providing beads 12 near the opposite ends of the body 1, they may be utilized as rings to permit rolling of the container. The beads 12 may be formed in the walls of the container as shown in Fig. 2.

Referring to Figs. 5 to 8, inclusive, the container 1' is shown as comprising a body 2' formed of fibre or wood, a bottom 3' and a top or cover 4'. The bottom may be formed of the same material or of sheet metal as shown. In this latter form of construction, the outer, circumferential portion of the bottom preferably has a rim 3a fitting the inner

wall of the body 2' and the marginal portion of the rim is folded around the end of the body into engagement with its outer wall, as shown at 3b, such portion and rim being secured to the body 2' by a rivet 3c passing therethrough.

6' indicates the attachment arranged at and surrounding the upper open end of the body 2', being secured to its exterior surface by a plurality of rivets 9a, and providing the rigid shoulder 8. The attachment 6' is similar in construction to the attachment shown in Figs. 1 to 4, inclusive. The top or cover 4' is rolled to form a bead portion 4a which fits the bead 7' of the ring 6', as shown in Figs. 6 and 7, and the tabs or wings 10' are bent under and against the shoulder 8' as shown in Figs. 6 and 8. In this form of construction the gasket 11' is compressed against both the bead 7' and upper end wall 2a of the body 2'.

Figs. 9 and 10 show a construction of container similar to that shown in Figs. 5, 6, 7 and 8, except that the attachment is crimped into the wall 2' to secure it thereto.

In a container having an attachment as herein described, both the body 2 and cover 4 may be formed from relatively thin sheet stock when formed of sheet metal or light material when formed of fibre or wood. At the same time, by providing a ring that is rigidly secured to the body wall, the bendable portions of the cover may be adequately secured to the body without danger of breaking or distorting the marginal portion of the latter. The bead of the ring in the form of construction shown in Figs. 1 to 4, serves to reinforce the terminating bead of the body around which the bead portion of the cover extends and provides a rigid wall in fixed spaced relation to the body portion of the ring and against which the wings may be bent with the gasket effectively compressed between terminating bead of the body and bead portion of the cover. The ring also reinforces the adjacent circumferential wall portions of the body so that danger of distorting the body terminating bead and the adjacent portions of the body, due to the force required to compress the gasket to insure a seal and bending of the wings or tabs in final position, is avoided.

To those skilled in the art to which my invention relates, many changes in construction and widely differing embodiments and applications of the invention will suggest themselves without departing from the spirit and scope of the invention. My disclosures and the description herein are purely illustrative and are not intended to be in any sense limited.

What I claim is:

1. A container having a relatively fragile side wall, an attachment secured to and surrounding the upper end of said side wall and

comprising a metallic ring having at its upper end a substantially semi-circular bead forming a free terminating rigid shoulder in spaced relation to its body portion, and a cover having a bead portion fitting over said bead and wings or tabs bent inwardly and against said shoulder.

2. A container having a relatively fragile side wall, an attachment secured to the end portion of said side wall and comprising a relatively wide metallic ring having a semi-circular rigid bead around its upper end forming on its periphery a shoulder spaced from the body portion of the ring and a space within the bead, said ring serving to reinforce the said side wall, and a cover having a bead portion fitting over said bead and wings or tabs bent inwardly around said shoulder into the space within said bead.

3. A container having a sheet metal side wall provided on its upper end with a bead, an attachment secured to the outer surface of said side wall and having a substantially semi-circular bead fitting within said first mentioned bead and terminating in a rigid shoulder in spaced relation to the body portion of said ring, the first mentioned bead terminating inwardly of the circumferential edge of the bead provided on said attachment to leave the said shoulder exposed, and a cover having a bead portion fitting over said beads and wings or tabs bent inwardly against said shoulder and upwardly into the space within said shoulder.

4. A container having a sheet metal side wall provided on its upper circumferential end with an annular bead, a relatively wide relative rigid ring secured to the outer surface of said side wall and having a circumferential bead fitting within the first mentioned bead, the bead on said ring being less than a complete circle in cross section whereby is provided a rigid shoulder forming a space therebehind and the free edge of said first mentioned bead terminating along a circumferential line remote from the circumferential edge of the bead provided on said ring, whereby the free edge of the bead provided on said ring is exposed, and a cover having a bead portion fitting over said beads and wings or tabs bent inwardly against said shoulder into the space therebehind.

In testimony whereof, I have hereunto affixed my signature.

HARRY F. COURTRIGHT.