Nov. 14, 1933. M. BRANDON 1,935,074

TOP RIM OR HOOP FOR CONTAINERS

Filed Oct. 2, 1931

Fig. 1.

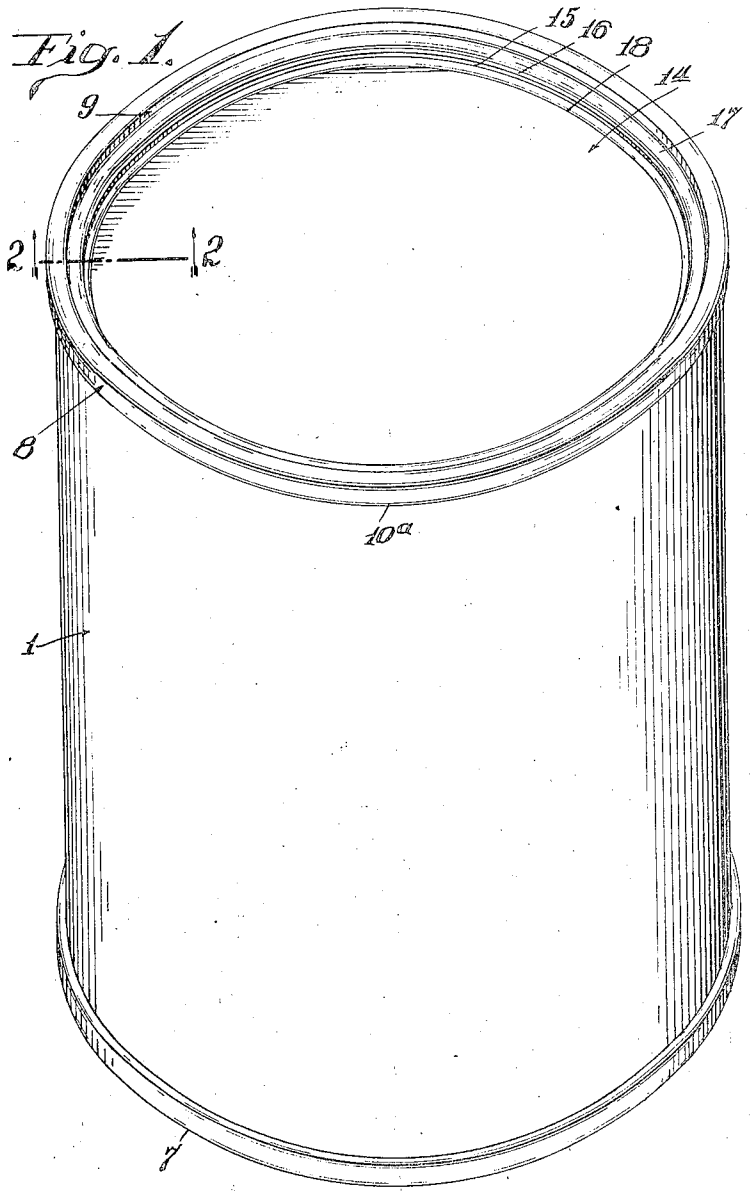


Fig. 2.

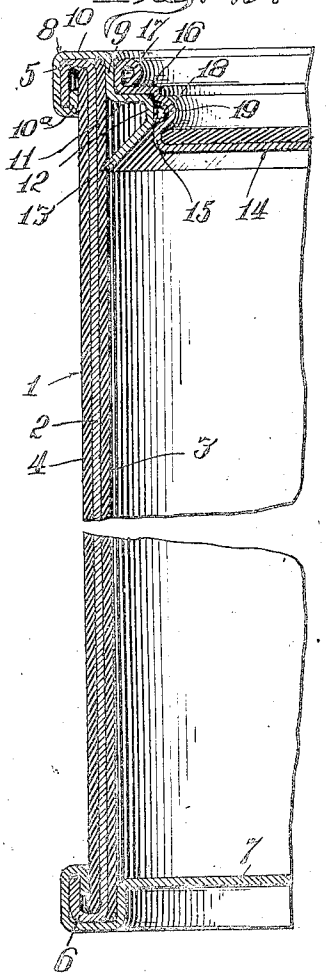


Fig. 3.

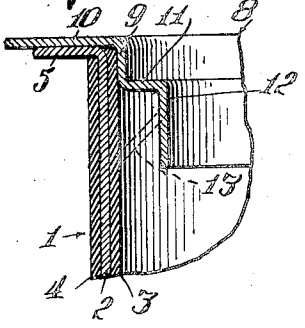
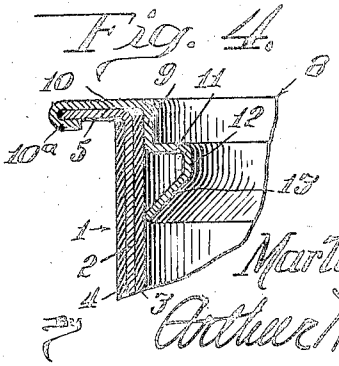


Fig. 4.



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TOP RIM OR HOOP FOR CONTAINERS

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3 Claims. (Cl. 220—42)

This invention relates to improvements in top rims or hoops for containers and it consists of the matters hereinafter described and more particularly pointed out in the appended claims.

In containers employing inset friction or like lids or covers, it has heretofore been the practice to form the rim with a seat for the lid and such a seat was spaced inwardly from the body and below the top end of the container. This provided a channel between the container and seat into which a part of the contents of the container would lodge when the container was inverted to empty the same. Thus it was somewhat difficult and took considerable time to insure a complete and thorough emptying of the contents from the container.

The primary object of the invention is to provide a rim or hoop for a container which includes an inclined flange portion that extends downwardly and outwardly from below the lid seat into engagement with a part of the container wall, thus closing off the space between said seat and container body to insure a complete and easy emptying of the container and at the same time rigidly holding the top of the container in its true shape and bracing it against distortion due to inside or outside strains or stresses.

A further object of the invention is to provide an improved lid for a container of this kind which includes a gasket that insures an air and water tight closure for the container.

The above mentioned objects of the invention as well as others, together with the many advantages thereof will more fully appear as I proceed with my specification.

In the drawing:—

Fig. 1 is a perspective view of a container embodying my improved top rim or hoop and to which the improved cover has been applied.

Fig. 2 is a vertical sectional view through one side of the container, on an enlarged scale as taken on the line 2—2 of Fig. 1.

Fig. 3 is a transverse vertical sectional view through the rim, showing its cross sectional shape before it has been attached to the container.

Fig. 4 is a view similar to Fig. 3 illustrating a step in the manner of applying the rim to the container body.

The invention is herein shown and described as employed in connection with a container having a composite body of sheet metal and inner and outer facing sheets of fibrous material such as paper. In such a container before the top rim is applied thereto, a margin of the metalic sheet is flanged outwardly.

The improved top or rim includes a top flange for turning under into engagement with the flange of the body, a seat flange axially spaced therefrom and of a smaller diameter and connected at its outer margins by an annular wall to said top flange and including a depending annular flange at its inner margin, said flange including a bottom portion which is flared downwardly and outwardly to have an edgelike engagement with the body so as to close off the annular space behind said depending annular flange.

When the top flange has been turned under in connection with the top flange of the container body, this securely attaches the rim in place, and the whole rim structure holds the container body in its true shape against collapse or bulging due to outside or inside stresses or strains.

The lid in this case engages upon the seat flange and has an inwardly beaded part to engage the depending part of the rim and a gasket is provided in the bead to provide a good tight sealing engagement between the rim and lid or cover.

Referring now in detail to that embodiment of the invention, illustrated in the drawing:— 1 indicates as a whole the composite cylindrical tubular body of a container made from a strip of sheet metal 2 having inner and outer facings 3 and 4 of paper or the like attached thereto in a manner leaving top and bottom flanges 5 and 6. This last mentioned flange is turned over into a hooked engagement with a container bottom 7 in any approved fashion. As the manner of attaching the bottom to the body forms no particular part of the present invention, it is only mentioned generally.

8 indicates as a whole the improved top rim or hoop for the container body. As best shown in Fig. 3 the rim or hoop which is made of thin sheet metal includes a short annular wall 9 of a diameter snugly fitting the inside of the container body and terminates at its top in a relatively wide, radial flange 10. Integral with the bottom of said annular wall is a relatively narrow and inwardly extending radial seat flange 11 which is spaced axially from the plane of the top flange. Depending from the inner margin of the seat flange is a relatively short annular flange 12, the bottom marginal portion 13 of which is flared outwardly and downwardly so that its edge is disposed in substantially the plane of the annular wall 9. The corners between said walls and flanges are preferably made relatively sharp and this is easily accomplished because of the

thinness of the sheet metal from which the rim or hoop is made.

The rim thus far described, is made as a stamping from sheet metal and when it comes from the press the portion 13 of the wall 12 is made as a straight continuation of said wall and is thereafter flared by spinning. This method is preferable to forming a strip and then welding the ends thereof together in hoop form because this would leave a part of a double thickness where said ends overlap. In making up the hoop as a stamping and starting with the size of hoop or rim for the largest container, the next size hoop is made from the blank disc left from the first and so on down to the smaller sizes. Thus many different sizes of rims or hoops is provided from a piece of sheet metal and this with but a minimum of waste.

In applying the rim or hoop to the container body, the rim as shown in Fig. 3 is first inserted into the top end of the body with the wall 9 and edge of the flared portion 13 thereof engaged with the body and is then pushed downwardly into the body until the top flange 10 engages the top flange 5 previously provided on the body. The flange 10 is somewhat wider than the body flange 5 and the marginal portion of said flange 10 is then turned down and under the body flange as indicated at 10*a* in Fig. 4. The two flanges are then simultaneously turned down into engagement with the outer facing of the body as shown in Fig. 2, thus providing an interlocking of the hoop and body flanges which defies removal of the hoop from the body.

When the hoop has been thus attached to the body, it materially stiffens the same and closes off the space between the wall 12 of the hoop and the body of the container.

With such a construction, when the container is inverted for the purpose of emptying the contents therefrom, no part of the contents whether it be of a bulky or granular character can lodge in said space behind said wall 12 of the hoop and thus a complete emptying of the contents is assured.

In connection with the hoop or rim mentioned, I provide an improved lid or cover which has a tight friction fit with the seat flange 11 and wall 12 of the rim or hoop. Said lid or cover is a recessed one and comprises a bottom wall 14, an upstanding annular wall 15 of a depth greater than that of the wall 12 of the hoop and an outwardly extending stop flange 16 to engage on the seat 11 of the rim or hoop. The stop flange terminates in an inwardly curled head 17. In the annular wall 15 of the lid or cover is provided an annular groove 18 in which is located a sealing gasket 19 in the form of a piece of rubber tubing of a diameter somewhat smaller than the width of said groove. When the lid or cover is in a closed position on the rim, the bead providing the groove 18 is disposed below the plane of the seat flange 11 and said sealing gasket is somewhat distorted out of shape cross sectionally to fill up said groove 18 and seat with a good sealing fit against the wall 12 of the rim or hoop. With the bead 17 disposed in this manner, the closed containers may be readily stacked and said bead also makes it easy to insert a screw driver or the like behind the same to pry the lid loose for removal.

While in describing the invention, I have referred in detail to the form, arrangement and construction of the various parts thereof, the same is to be considered as illustrative only, so that I do not wish to be limited thereto except as may be specifically set forth in the appended claims.

I claim as my invention:—

1. In combination with a metallic container body having an inner facing sheet, an integral metallic top rim or hoop for said body comprising an annular wall part fitting against a portion of said facing sheet, a top end outwardly extending radial flange fixed to a part of the metallic body beyond said facing sheet, a bottom end inwardly extending portion, and a second annular wall part of a diameter smaller than the first mentioned one and extending in a direction opposite thereto, said second annular wall part terminating in an outwardly and downwardly flared flange having its edge permanently engaged with said facing sheet a distance spaced from said first mentioned annular wall part.

2. In combination with a metallic container body having an inner facing sheet, an integral metallic top rim or hoop for said body comprising an annular wall part fitting against a portion of said facing sheet, a top end outwardly extending radial flange having a folded over engagement with a part of said body beyond said facing sheet, a bottom end inwardly extending flat cover engaging seat and a second annular wall part of a diameter smaller than the first mentioned one and extending in a direction opposite thereto, said second annular wall part terminating in a downwardly and outwardly flared flange having its edge permanently engaged with said facing sheet a distance spaced from said first mentioned annular wall part.

3. In combination with a container body of sheet material, an integral metallic top rim or hoop for said body, comprising an annular wall part fitting against a portion of said body, a top end outwardly-extending radial flange fixed to an end part of said body, a bottom end inwardly-extending portion and a second annular wall part of a diameter smaller than the first mentioned one and extending in a direction opposite thereto, said second annular wall part terminating in an outwardly and downwardly flared flange, having its edge permanently engaged with the inner face of the body a distance spaced below said first mentioned annular wall part.

MARTIN BRANDON.