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OUTTURNED EDGE CAN CLOSURE

Filed Feb. 12, 1923

Fig. 1.

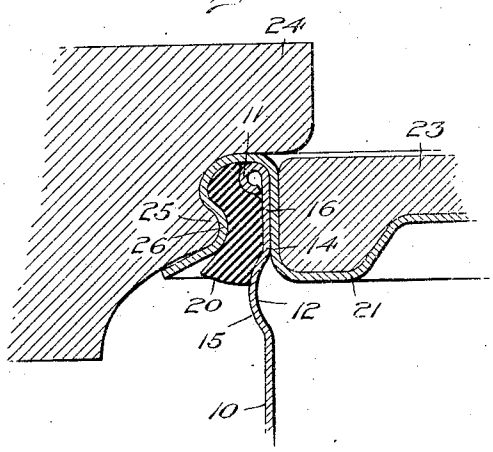
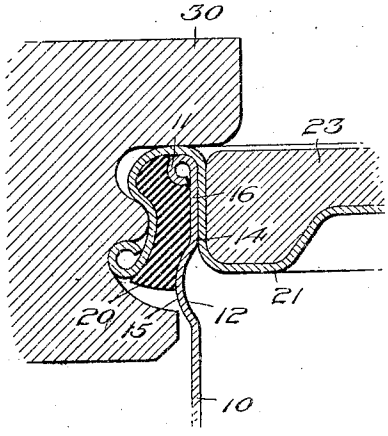


Fig. 2.



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UNITED STATES PATENT OFFICE.

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OUTTURNED-EDGE CAN CLOSURE.

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This invention relates to can closures and has for its object the provision of a container of the friction closure type wherein the container is sealed at the time the can is made and the cover so formed that when the seal is broken and the contents of the can partly used the cover may be replaced on the can and the friction closure will form an effective seal, the improvements consisting of certain changes in configuration whereby the sealing of the can is facilitated and the strength of the container as a whole increased.

A further object of the present invention consists in providing a can and cover of the friction closure type in which each member is provided with a rigid, closed, rolled edge.

A still further object of the present invention is the provision of a shoulder on the can body to form an annular stop for preventing movement of the gasket away from the cover during the sealing operation.

In the latest and most improved types of friction closures for sanitary cans the cover edge is rolled down and toward the cylindrical surface of the can so as to bind the gasket between the cover flange and the can body, this operation flaring the edge of the can outwardly and forming a rather sharp edge. In these types the rim of the finished sealed cover is sometimes rolled to form a rigid edge or head, the peripheral portion of the end or cover being outturned at the close of the sealing operation.

Considerable difficulty has been encountered in the sealing of such cans due to the tendency of the gasket ring to creep downward away from the mouth of the can when the cover is subjected to radial pressure in the rolling operation which obviously decreases the diameter of the gasket ring. It thus occurs that the gasket bows downward in advance of the spinning rollers at times to such an extent as to form an imperfect seal.

One of the objects of the present invention, as previously stated, is to prevent this creeping downward of the gasket, this purpose being accomplished by providing an annular bulge or ridge which forms an annular shoulder or stop portion which guides the gasket and overcomes to a very large measure the bowing of the gasket away from the cover and mouth of the can.

In the drawings,—

Figure 1 is a vertical section through a portion of the can showing the parts as they appear after the first spinning roller has completed its cycle of movement.

Fig. 2 is a similar view, but showing the closure in its finished state after the second spinning roller has formed the closed bead or rolled edge on the cover.

In the usual method of making cans particularly those of the sanitary type having removable covers the removable cover is applied in the can factory and is sealed on one end of an open ended cylindrical body member and the permanent cover which forms the bottom of the can is not applied until the container is filled; the invention herein issue therefore will be described in connection with such practice.

The can body 10 is generally cylindrical but the rim of the mouth is outturned to form a rolled edge 11 and at a distance from this rolled edge the can body is indented on the inside as at 12 producing an annular swell or ridge 15 on the outside of the can so that a shoulder 14 is formed by the ridge 15 and the cylindrical portion 16 between the ridge and the rolled edge 11.

It is preferred that the rolled edge and the shoulder should be formed in the can body before the blank passes to the sealing machine but this is not essential. It is also preferred to apply the gasket 20 to the cylindrical portion 16 of the can body rather than to the cover 21, but this is also a matter of choice, depending largely on what style of gasket is used. As shown, the gasket 20 is of rubber and is applied to the can body in any desired manner, with or without the use of an adhesive; but this gasket may be formed by depositing a layer of liquid rubber composition on the cover or on the can body.

The can body with its rolled edge and bead preformed and carrying the necessary gasket is placed on the usual spinning table (not shown) and the cover is placed on the chuck 23 which in accordance with usual practice is rotated at high speed. When the spinning table moves upwardly so as to bring the can

body into firm engagement with the can cover the first spinning roller 24 moves radially towards the axis of the spinning table with its axis constantly parallel to the edge of the can so that its central rounded projection 25 comes in contact with the flange of the can cover and indents it as at 26, deforming and compressing the gasket against the outer surface of the container body and against both the rolled edge 11 and the ridge 15.

Downward movement of the gasket is prevented by the shoulder 14 so that the gasket is compressed so as to take up the slack, being guided and limited by the ridge 15 and the rolled edge 11. The second spinning roller 30 rolls the edge of the cover to form a rigid edge or closed bead. The second spinning roller, if desired, may compress the gasket a slight amount further, but in practice this has been found to be of no advantage and as illustrated the second spinning roller has no function save to form the outturned rolled edge on the cover.

What I claim is:

A can seam including a container having an annular indentation on the inside producing an exterior ridge forming a shoulder near the mouth of the container, an outturned stiffening rolled edge on the container, a gasket engaging said container between the rolled edge and the ridge, a cover frictionally engaging the container between said rolled edge and said indentation and extending beyond the wall of the container parallel to the plane of the mouth and then turned downward to form a channel, the outer wall of the channel being indented to compress the gasket against the can body and a stiffening rolled edge on said cover.

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