

Dec. 16, 1958

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2,864,528

METAL CAN FOR FOOD PRODUCTS

Filed Aug. 20, 1954

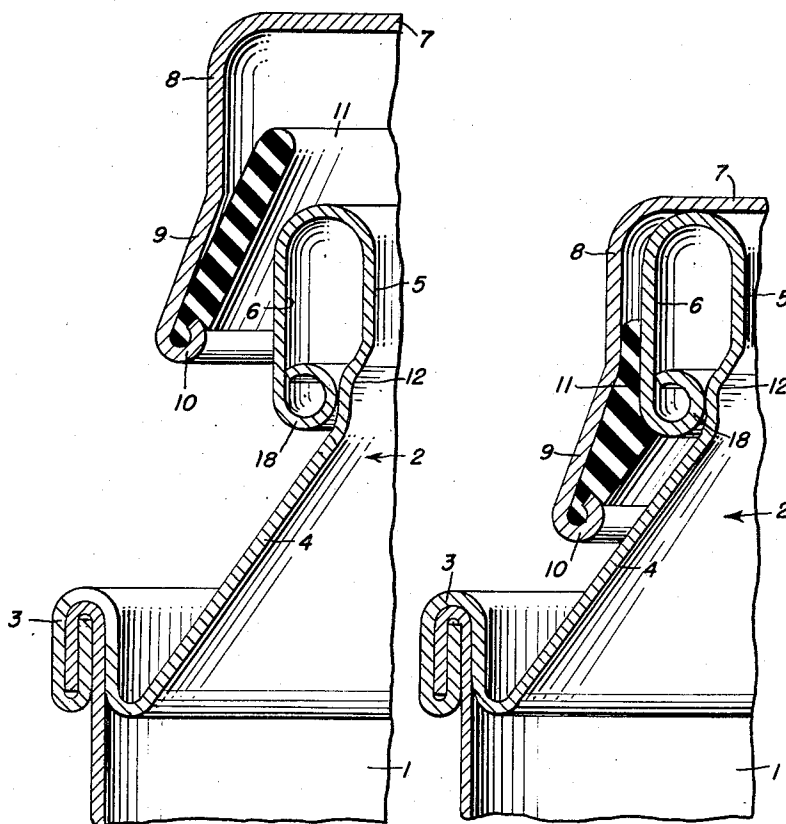


FIG. 1

FIG. 2

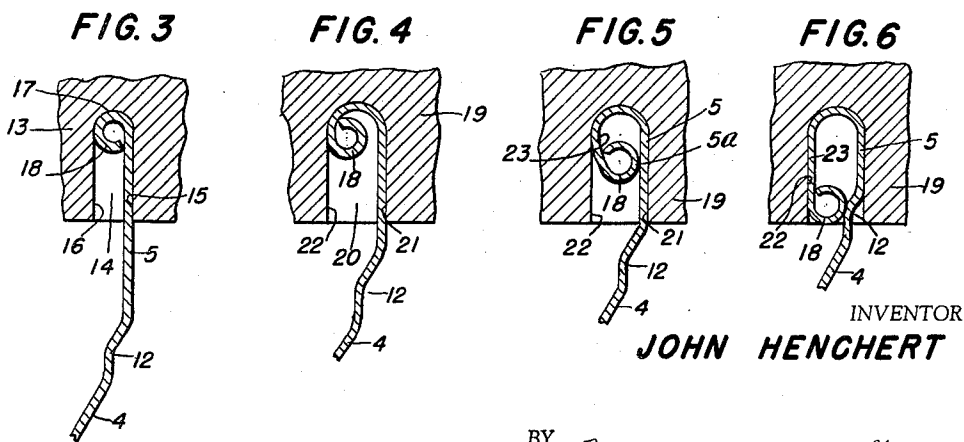


FIG. 3

FIG. 4

FIG. 5

FIG. 6

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METAL CAN FOR FOOD PRODUCTS

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Application August 20, 1954, Serial No. 451,223

2 Claims. (Cl. 220—46)

The invention relates to new and useful improvements in a metal container for food products.

An object of the invention is to provide a drawn metal top for a container which includes a cone-shaped portion terminating in a cylindrical neck and wherein the upper end portion of the neck is rolled outwardly and downwardly to provide a vertical friction wall spaced from the neck and rigidly supported by a closed hollow bead at the lower end of the friction wall contacting an outwardly curved portion formed in the cone-shaped top.

In the drawings which show by way of illustration one embodiment of the invention:

Figure 1 is a view showing in section a portion of a container top and cover therefor with the improvements applied thereto.

Figure 2 is a view showing a portion of a container and cover with the cover attached to the container.

Figure 3 is a detailed view in section of a curling die showing the first step in the method of rolling the neck portion outwardly to form a closed hollow bead.

Figure 4 is a detailed view in section of another curling die showing the second step in the method of rolling the neck portion outwardly to form a cylindrical sealing wall.

Figure 5 is a view similar to Figure 4 but showing a further step in the curling process wherein the hollow bead contacts the neck portion, and

Figure 6 is a still further view similar to Figure 4 but showing the bead as moved down the neck portion onto an outwardly projecting curved portion which forces the bead carrying wall outwardly against the wall of the die, thus forming a vertical friction sealing wall for the container.

The invention relates to a metal container for food products. The container is of the type shown in the patent granted John Coyle and William F. Punte, December 26, 1950, No. 2,535,839. The container body and top, however, are formed separately instead of being drawn from a sheet of metal.

The container as illustrated in the drawings includes a body portion 1 to which a top end 2 is secured by the usual double seam 3. The bottom end of the container is (not shown) likewise double-seamed to the body wall 1. The top end 2 of the container is die formed to provide a cone-shaped top 4 terminating in a cylindrical neck portion 5. Formed integral with the neck portion is a depending vertical wall 6 which serves as a friction sealing wall to which the cover is attached.

The cover as shown in Figure 1 includes a top 7 having a depending skirt 8 bent outwardly at 9 and thence curved inwardly at 10 to retain a gasket 11. The type of cover to be used for closing the container is the same as that shown in the Coyle et al. patent supra. The novel feature in the present invention resides in the manner in which the vertical frictional wall is rigidly supported and the method of making the same by die shaping the upper portion of the cylindrical neck. The method of forming the improved can top consists in die

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shaping a sheet of metal to provide a cone-shaped portion 4 terminating at its upper end in a cylindrical neck portion 5. The cone-shaped top is subjected to a forming die so as to provide an outwardly curved portion 12 which merges into the cone-shaped top at its upper end and thence into the cylindrical neck portion 5. The cone-shaped top thus formed is subjected to a die 13 having a die forming cavity 14 with parallel side walls 15 and 16 and a curved portion 17 at the top of the cavity. When the neck portion is forced into this cavity the upper end portion thereof will be rolled into a closed bead 18. After having formed this closed bead at the upper end of the neck portion then the can top is subjected to a curling die 19 which has a cavity 20, and side walls 21 and 22. The forcing of the die onto the neck portion will curl the neck portion outwardly and thence downwardly to the position shown in Figure 4. Continued pressure of the die 19 onto the neck portion will cause the curled end to move away from the vertical wall 22 and across the cavity into contact with the neck portion at 5a. Further curling pressure of the die will cause the hollow bead 18 to move downwardly along the neck 5 and onto the outwardly projecting curved portion 12. This outward movement of the bead will force the bead carrying portion 23 against the wall 22 of the die and shape said wall 23 into a vertical friction sealing wall with which the gasket of the cover makes contact. The hollow bead maintains its contact with the curved portion 12 of the cone-shaped top and this will rigidly support this friction wall 23.

With this rigidly supported friction wall for sealing contact of the gasket a very efficient seal will be obtained. When the container is opened by prying off the cover for removing a portion of the food product and then reclosed this rigidly supported sealing wall will again make a tight seal.

It is obvious that minor changes in the shaping of the parts may be made without departing from the spirit of the invention as set forth in the appended claims.

I claim:

1. A metal container having a cone-shaped top terminating in a cylindrical neck, the upper end portion of said neck being outwardly and downwardly turned and merging downwardly into a cylindrical friction sealing wall terminating at its lower extremity in an inwardly turned closed bead and being spaced away from said neck a greater distance than the cross section of said bead, the lower end of the cylindrical neck terminating in an outwardly offset wall portion which is integrally joined to the upper end of the conical portion, said bead bearing against said outwardly offset wall portion in position for maintaining said friction wall in a rigid vertical position.

2. A metal container having a cone-shaped top terminating in a cylindrical neck, the upper end portion of said neck being outwardly and downwardly turned and merging downwardly into a cylindrical friction sealing wall terminating at its lower extremity in an inwardly turned closed bead and being spaced away from said neck a greater distance than the cross section of said bead, the lower end of the cylindrical neck terminating in an outwardly offset wall portion which is integrally joined to the upper end of the conical portion, said bead bearing against said outwardly offset wall portion in position for maintaining said friction wall in a rigid vertical position, and a closure member for said container having a depending skirt, the upper portion of which is cylindrical and the lower portion flared outwardly and downwardly, and a ring gasket engaging the inner face of said flared portion and extending above the same, said cylindrical portion of the skirt and the friction wall on the neck being spaced a distance less than the thickness of the gasket so that when the closure is forced onto the con-

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tainer the gasket will wedge between the cylindrical portions and will expand inwardly beneath the rigidly supported bead at the lower end of the friction wall for sealing and holding the closure on the container.

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