June 11, 1935. J. COYLE 2,004,852

SHEET METAL CONTAINER

Filed Feb. 23, 1934

Fig. 1.

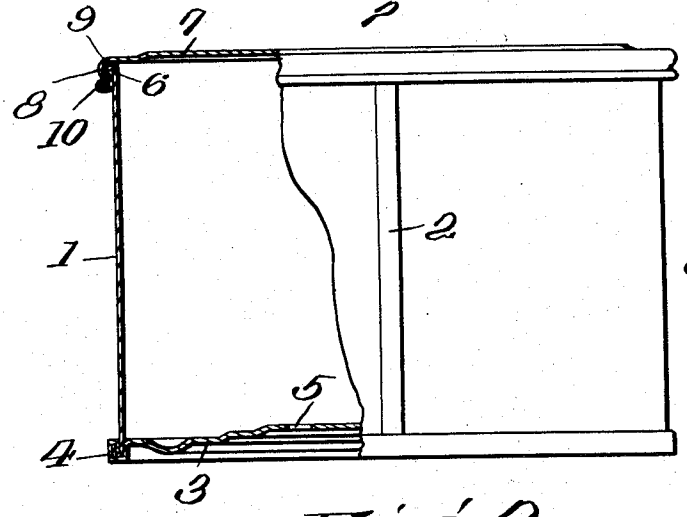


Fig. 6.

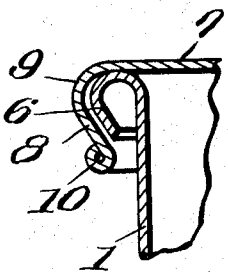


Fig. 2.

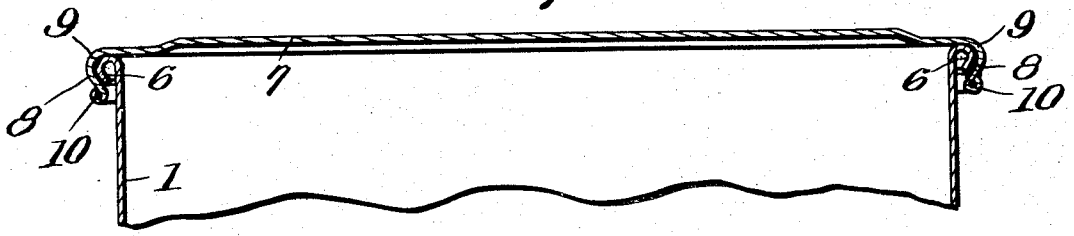


Fig. 3.

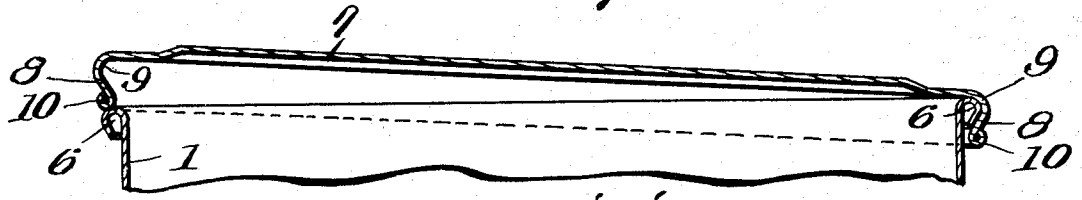


Fig. 4.

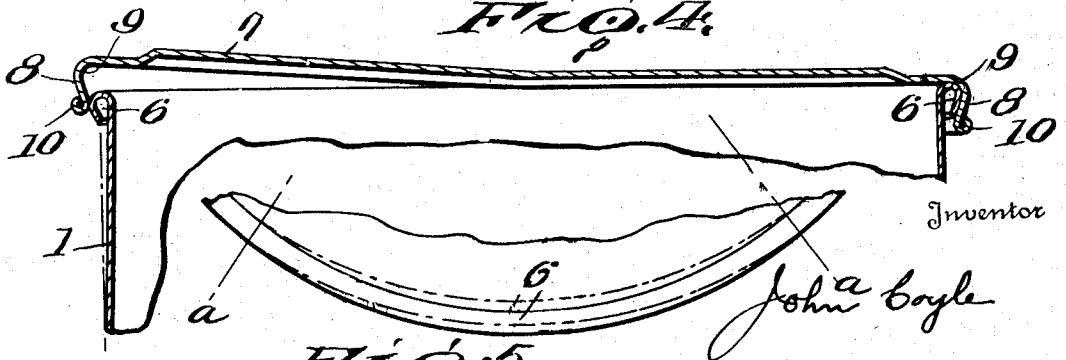


Fig. 5.

Inventor

John a Coyle

Sturtevant & Macrum

Attorneys

Patented June 11, 1935 2,004,852

UNITED STATES PATENT OFFICE

2,004,852

SHEET METAL CONTAINER

John Coyle, Baltimore, Md., assignor to Continental Can Company, Inc., New York, N. Y., a corporation of New York

Application February 23, 1934, Serial No. 712,646

1 Claim. (Cl. 220—60)

The invention relates to new and useful improvements in a sheet metal container, and more particularly to the means whereby a cover is removably secured to a container body.

An object of the invention is to provide a cover which may be attached to the container body by pressure applied to the cover in a direction substantially parallel with the walls of the container body, and wherein said cover is held in engagement with the container body through a frictional grip which may be released by a manipulating of the cover.

In the drawing—

Figure 1 is a view partly in side elevation and partly in section showing a container embodying the improvements;

Fig. 2 is an enlarged view through the upper portion of the container showing the cover fully seated;

Fig. 3 is a view showing the cover as released preparatory to the disengaging of the same from the container;

Fig. 4 is a view showing more or less diagrammatically the manner of springing a section of the cover to unhook the same from its locking engagement with the bead on the container body;

Fig. 5 is a plan view of the same, and

Fig. 6 is an enlarged view in vertical section through the container with the cover in place.

The container embodying the improvement is particularly designed for packing food products such as crab meat, wherein the product after it is packed is placed in ice for shipment. The particular feature embodying the invention is the manner of frictionally attaching the cover to the body portion of the container, so that the cover may be put on the container body merely by pressure applied thereto in a direction substantially parallel with the side walls of the container. The container body is provided with an outwardly rolled hollow bead, the outer edge portion of which is offset from the body wall slightly. The cover for the container is provided with a depending flange which is shaped so as to provide a retaining recess or pocket on the inner face thereof for receiving the bead on the container body. The inner diameter of the extreme lower edge portion of this depending flange is less than the maximum diameter of the bead. The extreme lower portion of the flange on the cover is spaced away from the body wall a slight distance. The lower end of this depending flange is rolled into a closed bead. When the cover and body are shaped as stated, the flange may be forced over the bead on the container body so that said bead will seat in said retaining recess in the flange by pressure applied to the cover in a direction substantially parallel with the walls of the container body. The cover can be removed through pressure applied to the body wall in a limited region in an inward direction at the same time that pressure is applied to the flange of the cover in the same region. In this manner, the cover is flexed or bent so as to release a section thereof from beneath the bead, and by shifting the pressure and applying the same in a similar manner to adjacent sections of the body and the end, the cover can be released.

Referring more in detail to the drawing, the container includes a body portion 1 having a side seam 2 which is preferably formed by lapping the end portions of the body and soldering the same. The lower end of the body portion is closed by a bottom end closure 3 which is secured to the body portion 1 by a double seam 4. This lower end closure is preferably provided with holes, one of which is indicated at 5, the purpose of which is to permit the free flow of the ice water into the can and about the crab meat when the can is packed in ice for shipment.

The upper end of the container body 1 is rolled outwardly and downwardly and inwardly to form a hollow bead 6. The lower edge of the hollow bead 6 is spaced away from the body wall a slight distance as indicated in the drawing. This gives more flexibility to the hollow bead to aid in the closing of the can and the removing of the cover therefrom.

The upper end of the container body is closed by a cover or closure end 7. Said cover is provided with a depending flange 8 which is curved downwardly and thence inwardly adjacent the plane of the cover, so as to provide a pocket or retaining recess 9 within said flange. The extreme lower edge portion of the flange is rolled outwardly to form a closed bead 10. The inner diameter of the flange in the region of the closed bead 10 is slightly greater than the outer diameter of the container body. It is of less diameter, however, than the maximum diameter of the bead 6 on the container body.

When the cover is placed on the container body, as shown, for example, in Fig. 3, a pressure on the cover in a direction substantially parallel with the side walls of the container will cause said flange to spring outward and the bead 6 to spring inward, so that said bead 6 on the container body will pass the bead 10 on the cover and seat within the recess or pocket 9. In Figures 1 and 2, the cover is shown as fully seated. It will be noted

that a cover has been provided which may be readily seated solely by pressure applied thereto. The dimensions of the hollow bead on the container body and the lower portion of the depending flange are such that when the cover is seated, it will be firmly held on the container body and will not be dislodged through any handling of the container for packing or during shipment.

When one desires to open the container, pressure is applied to the body wall of the container by the thumbs of the operator in a region between the lines *a*, *a* (Fig. 5), and this will cause the wall between said lines to move inward to a slight extent. The fingers are also placed on the cover substantially at these lines *a*, *a*, and the thumbs of the operator forced upward against the bead 10 so as to crowd said bead upward. This will cause the section between the lines *a*, *a* to flex upwardly as indicated in Fig. 4, and it will raise the bead 10 intermediate the lines *a*, *a* to a point where it will contact with the outer face of the bead 6 on the container body so that the frictional grip between the two will hold the container end section in this distorted raised position. By shifting the fingers and thumbs to a region adjacent the one where the end section is raised and applying pressure in a similar manner, another section is raised until finally the flange of the cover is sprung over the bead to a sufficient extent to release said cover from the container body.

It will be obvious that minor changes in the details of construction and the shaping of the parts may be made without departing from the spirit of the invention as set forth in the appended claim.

Having thus described the invention, what I claim as new and desire to secure by Letters Patent, is—

A metal container comprising a body portion having an upwardly projecting hollow bead at the upper end thereof, the lower portion of which is spaced away from the outer wall of the container body whereby said bead is permitted to yield inwardly, a cover for said body portion having a depending flange extending beneath said bead on the body portion, said cover flange being curved downwardly and inwardly so as to provide a retaining recess for the hollow bead on the container end, the lower edge portion of said depending flange being rolled outwardly into a closed bead disposed beneath the hollow bead on the container for strengthening said edge portion of the flange, said flange at the lower edge portion thereof having an inner diameter which is slightly less than the outer diameter of the hollow bead on the container body, and also a diameter which is greater than the outer diameter of the container body so that when said cover is seated on the container body, said lower portion of the flange is spaced away from the container body.

JOHN COYLE.