April 14, 1959 N. J. ALLBRIGHT ET AL 2,881,942

CONTAINER CLOSURE STRUCTURE

Filed Sept. 16, 1953

Fig. 1

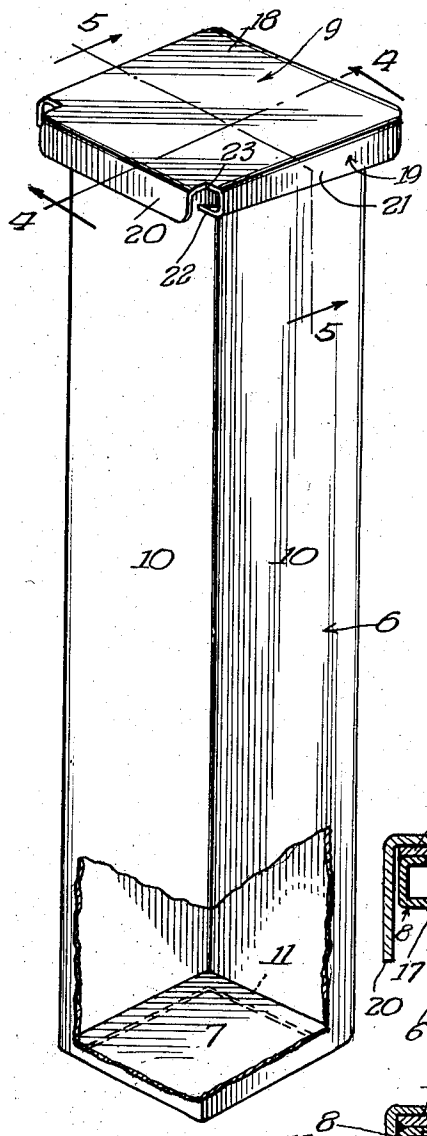


Fig. 2

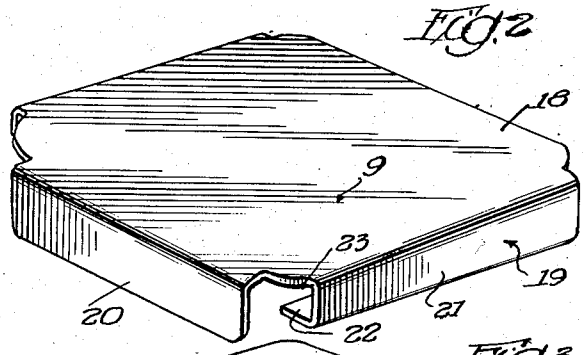


Fig. 3

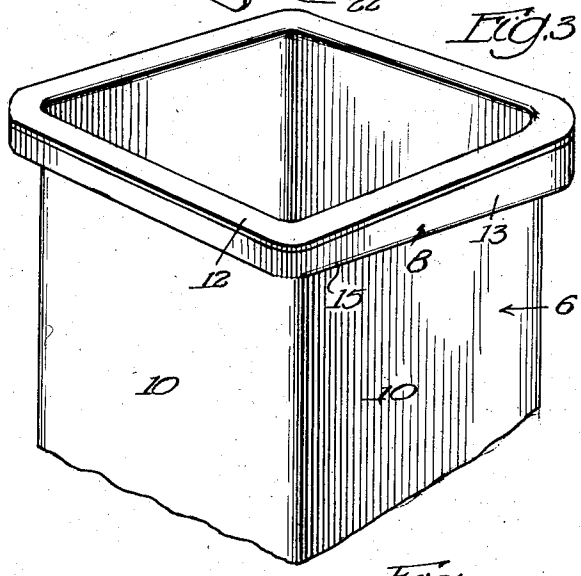


Fig. 4

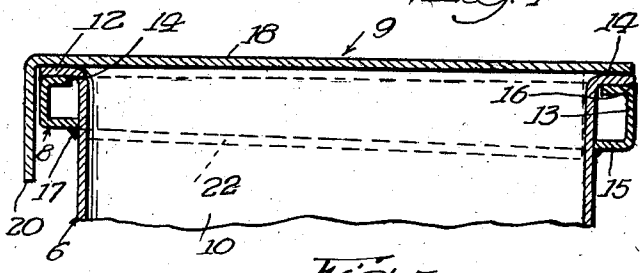
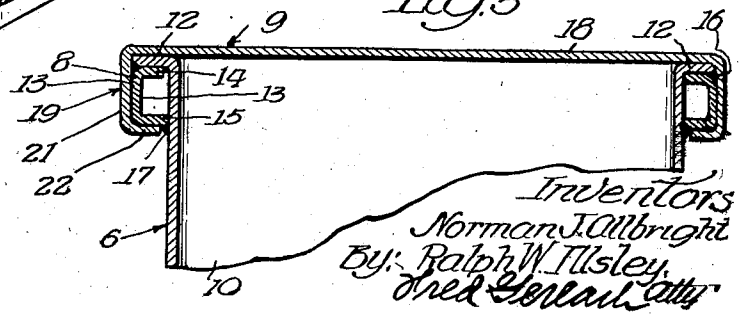


Fig. 5



Inventors
Norman J. Allbright
By: Ralph W. Illsley
Fred General Atty.

United States Patent Office 2,881,942 Patented Apr. 14, 1959

2,881,942

CONTAINER CLOSURE STRUCTURE

Norman J. Allbright and Ralph W. Illsley, Chicago, Ill., assignors to The Allbright-Nell Company, Chicago, Ill, a corporation of Illinois

Application September 16, 1953, Serial No. 380,568

1 Claim. (Cl. 220—41)

The present invention relates generally to containers. More particularly the invention relates to that type of container which is adapted to retain and mold or shape a food product, such as ground and mixed sandwich meat, while it is being cooked or otherwise processed and comprises an elongated tubular sheet metal body of substantially square cross section and with one end thereof normally open for insertion and removal of the food product and, in addition, a removable rectangular cover for closing the open end of the body during a cooking operation.

As evidenced by United States Patent No. 2,665,822, granted on January 12, 1954 to Louis L. Crawford, and entitled "Container With Removable Cover and Cover Clamping Means for Securing the Cover in Place," it has heretofore been proposed in connection with the manufacture or fabrication of a container of the aforementioned type to provide the open end of the body with a continuous outwardly extending integral flange and to employ wedge variety means between two oppositely disposed side portions of the flange and the corresponding side portions of the cover for releasably clamping the cover in its operative or closed position. In practice it has been found that a container having a continuous outwardly extending integral rectangular flange at the open end of the body and wedge variety means for releasably clamping the cover in place fulfills its intended purpose but, however, is subject to the objection that normal rough usage of the container is likely to result in bending or other distortion of the continuous outwardly extending flange. If the outwardly extending flange at the open end of the body becomes distorted it prevents proper seating of the cover with respect to the flange and also interferes with proper operation of the wedge variety means for clamping the cover in its operative position.

One object of the invention is to provide a container which is an improvement upon, and eliminates the principal objection to, previously designed containers of the type under consideration and is characterized by the fact that the continuous outwardly extending integral rectangular flange on the open end of the container body is effectively reenforced by way of a rectangular frame which is disposed around the open end of the body, underlies and abuts against the flange, is channel shaped in cross section and has certain parts thereof welded in place. By employing a rectangular frame of this character the continuous outwardly extending rectangular flange on the open end of the tubular body is so reenforced that it is not likely to become bent or distorted in connection with use of the container and hence the container as a whole is extremely durable and possesses comparatively long life.

Another object of the invention is to provide a container of the last mentioned character in which the rectangular flange reenforcing frame is in the form of a sheet metal stamping, consists of an intermediate web and a pair of laterally spaced inwardly extending flanges and is arranged so that its outermost flange, i.e., the flange that is nearer the outwardly extending flange on the open end of the body abuts directly against the last mentioned flange.

A further object of the invention is to provide a container of the type and character under consideration in which two oppositely disposed side portions of the innermost flange of the rectangular reenforcing frame are inclined at a small acute angle with respect to the adjacent side portions of the outermost inwardly extending flange of the frame to the end that two oppositely disposed side portions of the frame as a whole are wedge shaped and hence capable of coacting with the wedge variety means for clamping the removable cover in its closed or operative position.

A still further object of the invention is to provide a container of the aforementioned type which is generally of new and improved construction, effectively and efficiently fulfills its intended purpose and is characterized by simplicity of design and low cost of manufacture.

Other objects of the invention and the various advantages and characteristics of the present container will be apparent from a consideration of the following detailed description.

The invention consists in the several novel features which are hereinafter set forth and are more particularly defined by the claim at the conclusion hereof.

In the drawing which accompanies and forms a part of this specification or disclosure and in which like numerals of reference denote corresponding parts throughout the several views:

Figure 1 is a top perspective showing a container embodying the invention with the cover in place, parts of the lower end of the container body being broken away in order to illustrate the bottom construction of the container;

Figure 2 is a top perspective of the cover of the container;

Figure 3 is a top perspective of the container body illustrating in detail the arrangement of the rectangular frame for reenforcing the continuous outwardly extending flange on the open upper end of the container body;

Figure 4 is an enlarged transverse section taken on the line 4—4 of Figure 2; and

Figure 5 is an enlarged transverse section taken at right angles to Figure 4 and on the line 5—5 of Figure 1.

The container that is shown in the drawing constitutes the preferred form or embodiment of the invention. It is essentially designed for use in the meat packing industry and serves as a medium or instrumentality for retaining and molding or shaping a food product while the latter is being cooked or otherwise processed. Primarily the container is designed for use in connection with processing ground and mixed sandwich meat. As its components or parts the container comprises an elongated tubular body **6**, a bottom **7**, a reenforcing frame **8**, and a slide type cover **9**. All of these parts are formed of sheet metal of such gauge that the parts are rigid.

The body **6** is preferably square in cross section and comprises four rectangular sides **10**, the side margins of which are formed integrally with one another. The sides **10** are formed of sheet metal of such gauge that the body as a whole is rigid while at the same time it is sufficiently light in weight to permit it to be handled with ease and facility. The body **6** is shown in Figure 1 as being vertically positioned. It is to be understood, however, that the body may be placed in any desired position, such, for example, as a horizontal position. The lower end of the body is provided with a continuous inwardly extending rectangular flange **11** and the upper end of the body is provided with a continuous outwardly extending rectangular flange **12**. The flange **11** is formed integrally with, and extends inwards at right angles to, the lower margins of the body sides **10**. The flange **12**, as best shown in Figure 2, is formed integrally with, and pro-

jects outwards at right angles to, the upper margins of the sides **10** of the body **6**. Preferably the corner portions of the continuous outwardly extending flange **12** are curved or rounded so as to eliminate sharp points. The flanges **11** and **12** at opposite ends of the body serve to reenforce or strengthen the body against collapse or lateral distortion.

The bottom **7** of the container is in the form of a square sheet metal plate and serves as a closure for the bottom of the tubular body **6**. It is shaped conformably to the interior of the body and normally rests on, and is supported by, the continuous inwardly extending flange **11** on the lower margins of the body sides **10**. It is contemplated that the body will be filled with the food product to be processed by introducing the product while in a plastic form through the open upper end of the body. It is also contemplated that after the food product has been cooked or otherwise processed so that it is in hardened or semi-hardened form it will be removed from the body by applying such pressure to the bottom **7** that the bottom is caused to slide towards the open upper end of the body. The inwardly extending flange **11** prevents the bottom **7** from moving outwards through the so-called bottom of the body.

The reenforcing frame **8** of the container is in the form of a one-piece sheet metal stamping and is preferably formed of sheet metal of the same gauge as the body **6**. It is square or rectangular so far as general contour or configuration is concerned and is positioned around the upper open end of the container body **6** and directly beneath the continuous outwardly extending flange **12**. As best shown in Figures 4 and 5, the frame **8** is channel shaped in cross section and comprises a vertically extending intermediate web **13**, an inwardly and horizontally extending upper flange **14** and an inwardly extending substantially horizontal lower flange **15**. The web **13** is four sided and is the same in size and shape as the outer edge of the continuous outwardly extending flange **12** on the upper open end of the container body **6**. It serves vertically to space apart the inwardly extending flanges **14** and **15** of the frame **8** and is maintained by such flanges in outwardly spaced relation with respect to the adjacent portion of the upper open end of the body **6**. The upper flange **14** embodies four rectangularly arranged side portions and extends at true right angles to the intermediate web **13**. It is shaped conformably to and directly underlies the outwardly extending flange **12** and has the outer edge portion thereof connected fixedly or rigidly to the outer edge of the flange **12** by a continuous weld **16**. The lower flange **15** of the reenforcing frame **8** consists of four rectangularly arranged side portions and extends at right angles to the intermediate web **13**. It is the same in size and shape as the upper flange **14** and has the inner edge thereof connected fixedly or rigidly to the upper adjacent portions of the upper body sides **10** by a continuous weld **17**. The frame **8**, due to its construction and manner of mounting, serves to reenforce the continuous outwardly extending flange **12** against bending or distortion and, in effect, forms a downward continuation or enlargement of the flange **12**. The four rectangular side portions of the inwardly extending upper flange **12** of the reenforcing frame are coplanar. Two oppositely disposed side portions of the vertically extending intermediate web **13** are tapered in the direction of what may be termed or considered the front side of the container body and hence they are wedged shaped. Due to the fact that said two oppositely disposed side portions of the web are so shaped the side portions of the inwardly extending lower flange **15** that are connected to, and extend inwards from, such side portions of the web are forwardly and upwardly inclined at a small acute angle with respect to the superjacent side portions of the inwardly extending upper side flange **14** to the end that two oppositely disposed side portions of the reenforcing frame are of wedge-like character. The front side portion of the web **13** is straight or parallel sided and is the same in height as the small front ends of the two oppositely disposed wedge shaped side portions of the web. The back or rear side portion of the web is straight or parallel sided and is the same in height as the large rear ends of the two oppositely disposed wedge shaped side portions of the web.

The cover **9** of the container serves as a closure for the upper end of the body **6**. It is preferably in the form of a one-piece sheet metal stamping and consists of a main part **18**, a pair of side parts **19** and a front part **20**. Preferably the sheet metal of which the cover **9** is formed is of the same gauge as the sheet metal of which the body **6** is formed. The main part **18** of the cover is generally square and is substantially the same in shape as the continuous outwardly extending flange **12** on the upper open end of the container body. It is adapted when the cover is in place to extend across the flange **12** and thus close the upper open end of the body **6**. The side parts **19** of the cover **9** are formed integrally with, and depend from, the side margins of the main part **18** and consist of vertically extending portions **21** and inwardly extending portions **22** along the bottom margins of the vertically extending portions. The vertically extending portions are wedge shaped like the oppositely disposed wedge shaped side portions of the vertically extending intermediate web **13** of the reenforcing frame **8**. The inwardly extending portions **22** of the cover side parts **19** are forwardly and upwardly inclined due to the wedge shaped character of the vertically extending portions **21**. They extend at a comparatively small acute angle with respect to the main part **18** of the cover and define with the vertically extending portions **21** and the side margins of the main part **18** open sided open ended wedge shaped channels **23** which are shaped correspondingly to, and are adapted slidably to receive the oppositely disposed wedge shaped side portions of the reenforcing frame **8**. When it is desired to apply the cover **9** to the upper open end of the container body **6** the cover is manipulated into such position that the large open ends of the wedge shaped channels **23** are in alignment with the small ends of the oppositely disposed wedge shaped side portions of the reenforcing frame **8**. Thereafter the cover is slid rearwards and horizontally so as to bring the side parts **19** of the cover into straddled and wedged relation with the aforesaid wedge shaped side portions of the frame. The side parts **19** of the cover are so shaped that when they are in truly wedge relation with the oppositely disposed wedge shaped side portions of the frame the main part **18** of the cover extends complete across the continuous outwardly extending flange **12** on the upper open end of the container body. The front part **20** of the cover is connected to the front margin of, and extends downwards at right angles to, the main part **18** of the cover and forms a hand grip for use in sliding the cover into and out of place. When it is desired to remove the cover the depending front part **20** is grasped between the thumb and fingers and then urged forwards so as to slide the cover out of operative position wherein, as previously pointed out, the main part **18** overlies and extends across the outwardly extending flange **12**.

When it is desired to use the container the cover is first removed. Thereafter the bottom **7** is mounted in place on the continuous inwardly extending flange **11** and the container is filled by introducing the food product into the body interior via the upper open end of the body. After filling of the container body to the desired extent the cover is slid into its closed or operative position as heretofore pointed out. After sliding of the cover into place the container may be subjected to heat in order to cook or process the food product in the interior of the body. After the food product is processed and subsequently cooled or chilled for setting purposes the cover is removed and thereafter inward pressure is

applied to the bottom 7 in order to extrude the food product. The extruded product is in molded form and may be cut into slices for use in connection with sandwiches.

The herein described container effectively and efficiently fulfills its intended purpose and possesses long life due to the design, arrangement and construction of the rectangular frame 8 for reenforcing the outwardly extending flange 12 on the upper open end of the container body. The frame permits the container to be manufactured at a comparatively low cost and serves to prevent bending or distortion of the flange 12 in connection with usage of the container as a whole.

The invention is not to be understood as restricted to the details set forth since these may be modified within the scope of the appended claim without departing from the spirit and scope of the invention.

Having thus described the invention what we claim as new and desire to secure by Letters Patent is:

As a new article of manufacture a container designed to retain and mold a food product in connection with processing thereof and comprising a tubular body of rectangular cross section, formed of sheet metal, adapted to extend vertically and having the upper end thereof open and provided with a continous outwardly and horizontally extending integral flange, a separately formed continuous rectangular frame of channel shaped cross section, formed of sheet metal, disposed around the upper end of the body and so that it is directly beneath the outwardly extending flange, serving to reenforce said flange against bending or distortion, embodying a vertically extending intermediate web in parallel and spaced relation with said upper end of the body, a horizontal inwardly extending upper flange in direct underlying relation with the outwardly extending flange and a horizontal

inwardly extending lower flange, having the outer margin of its upper flange the same in size as, and connected by a continuous weld to, the outer margin of the outwardly extending flange, having the inner margin of the lower flange thereof abutting against, and connected by a continuous weld to, the adjacent portion of the upper end of the body, and having two oppositely disposed side portions thereof of wedge shaped configuration, and a substantially rectangular cover adapted to extend across and close the upper open end of the body and having associated with certain oppositely disposed side portions thereof downwardly extending means forming inwardly facing wedge shaped channels for slidably receiving the wedge shaped oppositely disposed side portions of the frame.

References Cited in the file of this patent

UNITED STATES PATENTS

570,096	Hicok et al.	Oct. 27, 1896
731,519	Snigo	June 23, 1903
1,235,069	Skinner	July 31, 1917
1,624,496	Mauser	Apr. 12, 1927
1,897,890	Cook	Feb. 14, 1933
1,941,126	Blackman	Dec. 26, 1933
2,133,461	McAbee	Oct. 18, 1938
2,227,712	Hackley	Jan. 7, 1941
2,330,306	Murphy	Sept. 28, 1943
2,371,586	Schwartz	Mar. 13, 1945
2,472,582	Green	June 7, 1949

FOREIGN PATENTS

7,643	Great Britain	1900
457,885	France	July 24, 1913