March 27, 1945. R. LO VICO 2,372,331

PRESET PRESSURE CAN FOR FROZEN FOODS OR THE LIKE

Filed Sept. 10, 1943

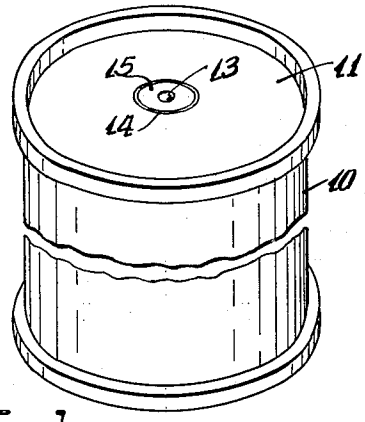


Fig. 1.

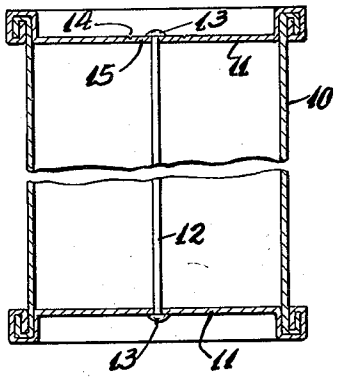


Fig. 2.

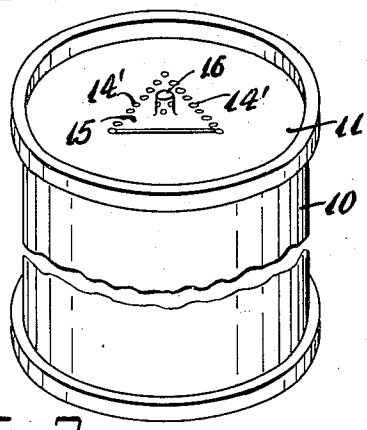


Fig. 3.

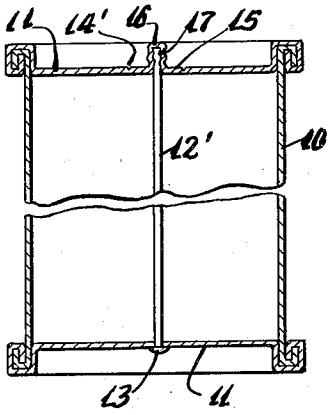


Fig. 4.

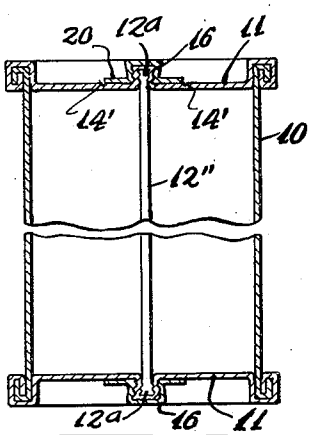


Fig. 5.

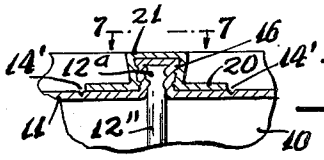


Fig. 6.

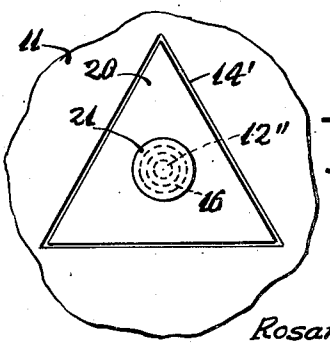


Fig. 7.

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PRESET PRESSURE CAN FOR FROZEN FOODS OR THE LIKE

Rosario Lo Vico, Astoria, Long Island, N. Y.

Application September 10, 1943, Serial No. 501,776

8 Claims. (Cl. 220—89)

This invention relates to new and useful improvements in present pressure cans for frozen foods and the lake materials. This application is a continuation-in-part of my application Serial No. 347,368 filed July 25, 1940, issued on December 14, 1943, under Patent Number 2,336,490.

More specifically, this invention contemplates a preset pressure can having a hollow cylindrical can body with hermetically sealed end walls. It is proposed to provide a non-stretchable rod extending axially of said can body and being fixedly attached at its end portions upon said end walls. It is furthermore proposed to provide a continuous score line upon one of said end walls dividing off a small area around the adjacent end portion of said rod.

It is another object of this invention to provide novel means for fixedly attaching the end portions of said rod with said end walls.

The invention further contemplates a novel arrangement and construction of the continuous score line to facilitate puncturing the can when pressure above the preset pressures are reached.

For further comprehension of the invention, and of the objects and advantages thereof, reference will be had to the following description and accompanying drawing, and to the appended claims in which the various novel features of the invention are more particularly set forth.

In the accompanying drawing forming a material part of this disclosure:

Fig. 1 is a perspective view of a can constructed in accordance with this invention.

Fig. 2 is a central vertical sectional view of the can shown in Fig. 1.

Fig. 3 is a perspective view of another can constructed in accordance with another form of this invention.

Fig. 4 is a vertical central sectional view of the can shown in Fig. 3.

Fig. 5 is another vertical sectional view similar to Fig. 4 but illustrating a modified form of can.

Fig. 6 is a fragmentary enlarged detailed view of a top portion of Fig. 5.

Fig. 7 is a fragmentary plan view looking in the direction of the line 7—7 of Fig. 6.

The preset pressure can for frozen foods and the like materials, as embodied in Figs. 1 and 2, includes a hollow cylindrical can body 10 provided with the usual hermetically sealed end walls 11. These end walls are double seamed upon the ends of the can body 10 in the usual way.

A non-stretchable rod 12 extends axially of said can body 10 and is fixedly attached at its end portions upon the end walls 11. More specifically, the rod 12 extends through complementary openings in the end walls 11. Its extremities are provided with heads 13 which are welded or in any other fashion hermetically connected with the end walls 11. A continuous score line 14 is impressed upon or formed on one of the end walls and divides off a small area 15 around the adjacent end portion of the rod 12. The score line 14 is shown of circular design, though it could be fashioned in other designs.

The operation of the present pressure can is as follows:

The can is used in the usual way for holding and preserving frozen foods, and the like and other materials. The can automatically opens when the internal pressure exceeds a preset amount. When this occurs the end walls 11 tend to bulge outwards. However, the non-stretchable rod 12 holds the central portions of the end walls fixedly together. Consequently, the weakened score line 14 will rupture and the can thus is opened.

In Figs. 3 and 4 a modified form of the invention is disclosed which is very similar to the prior form, distinguishing in the fact that the continuous score line 14' is arranged in triangular formation, and in the fact that the end of the rod 12', which is adjacent the score line 14', is secured to said end wall 11 in an improved fashion. More specifically, the end wall 11 has an outwardly drawn socket portion 16 into which the end of the rod 12' extends. This end portion of the rod is formed with niches or recessed or roughened portions 17. The socket portion 16 is tightly pressed on to the end portion of the rod 12' so that the pressed in portions thereof will engage and grip the roughened portions 17. In other respects this form of the invention is identical to the previous form and like parts are identified by like reference numerals.

In Figs. 5 to 7 still another form of the invention has been disclosed which is similar to the form shown in Figs. 3 and 4, but distinguishing in several respects. In this form of the invention the non-stretchable rod 12'' has both of its ends secured to the end walls 11 by the use of socket portions 16 formed on the end walls 11 and engaging and gripping the end portions of the rod 12''. To facilitate the gripping operation the end portions 12^a of the rod 12'' are fashioned to simulate frusto-conical figures, and the drawn sockets 16 are similarly fashioned, see particularly Fig. 6.

A triangular shaped puncturing member 20 has its edge portions extending along the score

line 14'. This puncturing member 20 is also formed with a socket portion 21 engaged upon and clamped on and gripping the socket portion 16. The puncturing member 20 is made of relatively hard material so that when the end wall 11 bulges up around it, the puncturing member 20 will readily cut and so puncture the said end wall.

A feature of using the socket portions upon the end walls of the can for gripping the end portions of the axial rod, resides in the fact that the end portions of the rod may be tightly gripped without necessitating openings in the end walls which are liable to leak even though sealed.

It is to be understood that the scoring may also be on the inside of the canned body ends as well as on the outside. The scored area may be either on the riveted end of the canned body or at the end where the socket has been drawn.

While I have illustrated and described the preferred embodiments of my invention, it is to be understood that I do not limit myself to the precise constructions herein disclosed and the right is reserved to all changes and modifications coming within the scope of the invention as defined in the appended claims.

Having thus described my invention, what I claim as new, and desire to secure by United States Letters Patent is:

1. A preset pressure can for frozen foods and the like materials having a hollow cylindrical can body with hermetically sealed end walls, a non-stretchable rod extending axially of said can body and fixedly attached at its end portions upon said end walls, and a continuous score line upon one of said end walls dividing off a small area around the adjacent end portion of said rod.

2. A preset pressure can for frozen foods and the like materials having a hollow cylindrical can body with hermetically sealed end walls, a non-stretchable rod extending axially of said can body and fixedly attached at its end portions upon said end walls, and a continuous score line upon one of said end walls dividing off a small area around the adjacent end portion of said rod, said rod extending through openings in said end walls and being provided with enlarged end heads extending over and covering said openings and being welded for hermetically sealing the same.

3. A preset pressure can for frozen foods and the like materials having a hollow cylindrical can body with hermetically sealed end walls, a non-stretchable rod extending axially of said can body and fixedly attached at its end portions upon said end walls, and a continuous score line upon one of said end walls dividing off a small area around the adjacent end portion of said rod, said score line being circular.

4. A preset pressure can for frozen foods and the like materials having a hollow cylindrical can body with hermetically sealed end walls, a non-stretchable rod extending axially of said can body and fixedly attached at its end portions upon said end walls, and a continuous score line upon one of said end walls dividing off a small area around the adjacent end portion of said rod, said score line being of triangular shape.

5. A preset pressure can for frozen foods and the like materials having a hollow cylindrical can body with hermetically sealed end walls, a non-stretchable rod extending axially of said can body and fixedly attached at its end portions upon said end walls, and a continuous score line upon one of said end walls dividing off a small area around the adjacent end portion of said rod, one end of said rod being fixedly attached to its end wall by extending into a socket portion drawn from the end wall and clamped thereon.

6. A preset pressure can for frozen foods and the like materials having a hollow cylindrical can body with hermetically sealed end walls, a non-stretchable rod extending axially of said can body and fixedly attached at its end portions upon said end walls, and a continuous score line upon one of said end walls dividing off a small area around the adjacent end portion of said rod, the end portions of said rod being fixedly connected with said end walls by the end portions extending into drawn socket portions formed upon the end walls.

7. A preset pressure can for frozen foods and the like materials having a hollow cylindrical can body with hermetically sealed end walls, a non-stretchable rod extending axially of said can body and fixedly attached at its end portions upon said end walls, and a continuous score line upon one of said end walls dividing off a small area around the adjacent end portion of said rod, the end portions of said rod being fixedly connected with said end walls by the end portions extending into drawn socket portions formed upon the end walls, and rigidly clamped thereon.

8. A preset pressure can for frozen foods and the like materials having a hollow cylindrical can body with hermetically sealed end walls, a non-stretchable rod extending axially of said can body and fixedly attached at its end portions upon said end walls, and a continuous score line upon one of said end walls dividing off a small area around the adjacent end portion of said rod, and a puncturing member having cutting edges extending along said score line and having a socket portion engaged and clamped upon one of said socket portions.

ROSARIO LO VICO.