Aug. 5, 1941. S. F. TRIPLETT 2,251,345

SAFETY SEAL FOR CANNED GOODS

Filed Jan. 24, 1939

Fig. 1

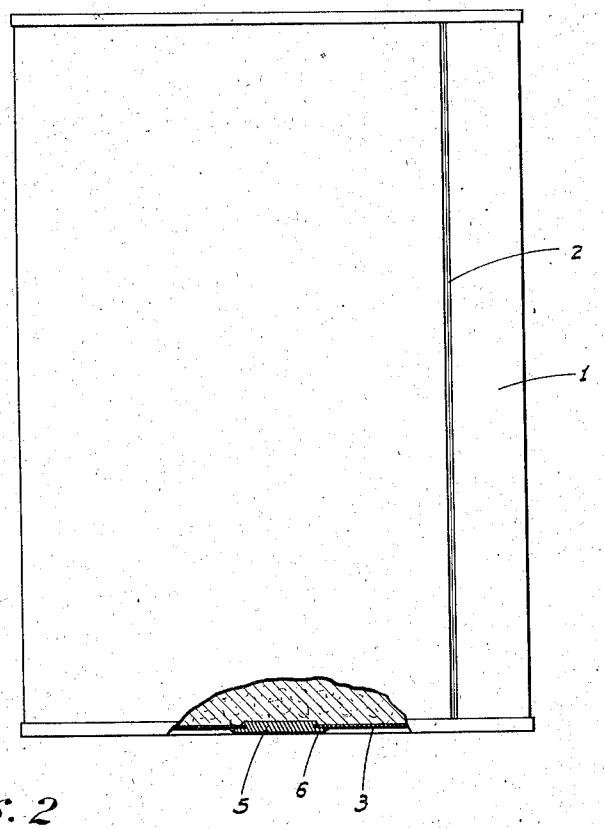
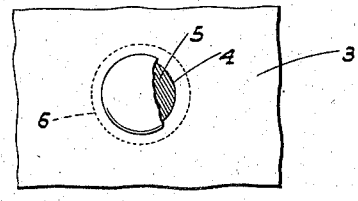


Fig. 2



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SAFETY SEAL FOR CANNED GOODS

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5 Claims. (Cl. 99—192)

This invention is one which is directed to improvements in metallic containers for canned goods, and particularly relates to an improvement in cans which are used for frozen but unsterilized foods.

At present all non-frozen canned goods are sterilized after the canning operation and while this prevents botulism, it also destroys certain of the natural or fresh characteristics of the product. For this latter reason, the frozen canned goods industry is rapidly developing due to the fact that products can be "quick frozen" and hermetically sealed in a can without destroying any of the natural flavors, etc. and as is a well known fact.

However with unsterilized frozen goods hermetically sealed in cans there is a problem which must be overcome before the product can be offered to the trade. While the unsterilized canned goods remain in frozen condition, the goods are properly preserved and, should the can become unfrozen accidentally, certain bacteria in the goods will soon produce spoilage which will cause the can to rupture—an occurrence which is, in itself, a safety feature. Yet, should a person purchase a can of unsterilized frozen goods and heat the same, without opening the can, in an attempt to sterilize the contents, and with the thought of thereafter keeping the can in an unfrozen condition, serious consequences can occur if a sterilizing temperature is not reached. For example, if the can and contents are heated to a temperature of between 145–212° F., bacteria causing spoilage is destroyed and the can would not burst as above described. Then, in this state, botulism would result with attendant danger.

It is therefore the principal object of the present invention to provide an improved metal container for unsterilized but frozen goods, and which container is constructed so that if the temperature of the container and contents is raised to a degree sufficient to destroy acid and gas forming bacteria, the hermetic seal of the container is likewise destroyed. When this occurs, the danger of botulism is gone as botulism can take place only in a sealed container.

A further object of the invention is to produce a simple and inexpensive device and yet one which will be exceedingly effective for the purpose for which it is designed.

These objects I accomplish by means of such structure and relative arrangement of parts as will fully appear by a perusal of the following specification and claims.

In the drawing similar characters of reference indicate corresponding parts in the several views:

Figure 1 is an elevation, partly in section, of a metal can embodying the invention.

Figure 2 is a fragmentary plan view of the inside of the can bottom and the safety seal therethrough.

Referring now more particularly to the characters of reference on the drawing, the numeral 1 indicates a metal can of common type and including a soldered side seam 2 and a bottom 3.

The can, preferably in the bottom, is provided with a relatively small hole 4 which is normally closed by a plug 5 having a flange 6 which engages the outside of the cam bottom in sealing relation.

This plug 5 is of a metal which melts at a temperature less than the temperature required to destroy the acid and gas forming bacteria in the goods in the can. Lipowitz's alloy, Woods' metal or the like are suitable for the purpose, and in the manufacture of the can, the plug can be formed or soldered in place.

With a can so constructed, a person cannot heat the can to sufficient temperature to destroy the acid and gas forming bacteria without breaking the hermetic seal of the can and thus botulism cannot occur.

The flange 6 on the seal is disposed against the exterior of the bottom so that when the plug begins to melt, there will be a tendency for all the plug metal to fall or be drawn outwardly and not into the contents of the can.

While it is preferred that the safety seal be in the form of a plug—as above—the desired result may be accomplished by soldering the side seam 2, or other soldered seams, with the low melting point metal.

From the foregoing description it will be readily seen that I have produced such a device as substantially fulfills the objects of the invention as set forth herein.

While this specification sets forth in detail the present and preferred construction of the device, still in practice such deviations from such detail may be resorted to as do not form a departure from the spirit of the invention, as defined by the appended claims.

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

1. In combination, a hermetically sealed metal container, a quantity of unsterilized frozen food therein, and a metal plug extending through

one wall of the container, said plug being of a metal having a melting point no greater than the minimum temperature required to destroy spoilage causing bacteria in said food.

2. In combination, a hermetically sealed metal container having unsterilized frozen food therein, and a metal plug extending through one wall of the container, said plug having a melting point of approximately 145° F.

3. In combination, a metal container having unsterilized frozen food therein, and means hermetically sealing the container, said means comprising, in part, metal having a melting point less than the temperature required to destroy acid and gas forming bacteria.

4. In combination, a hermetically sealed container, a quantity of unsterilized frozen food therein, and a meltable plug extending through one wall of the container, said plug being characterized by a melting point no greater than the minimum temperature required to destroy spoilage causing bacteria in said food, and normally maintaining said seal.

5. In combination, a container, a quantity of unsterilized frozen food therein, and means hermetically sealing the container, said means including an element having a melting point no greater than the minimum temperature required to destroy spoilage causing bacteria in said food.

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