S. C. LARSEN.

VACUUM CAN.

APPLICATION FILED SEPT. 16, 1920.

1,391,549. Patented Sept. 20, 1921.

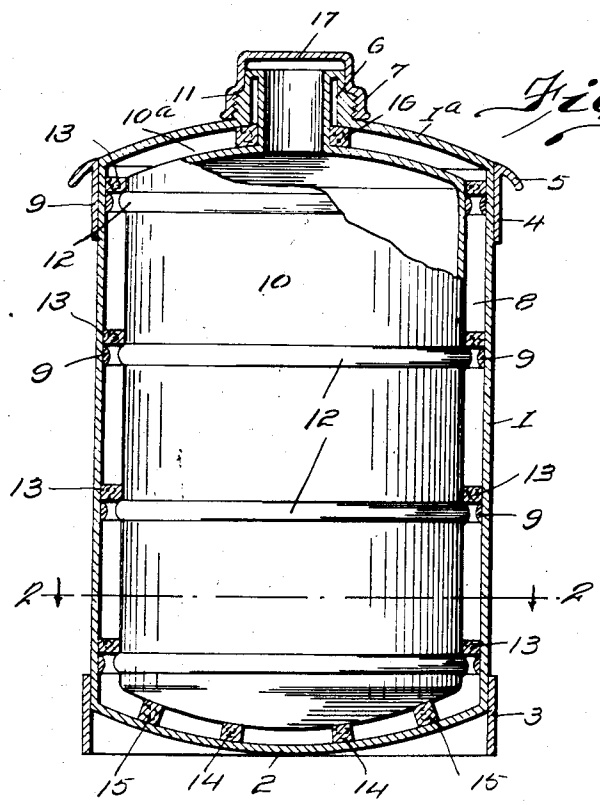


Fig. 1.

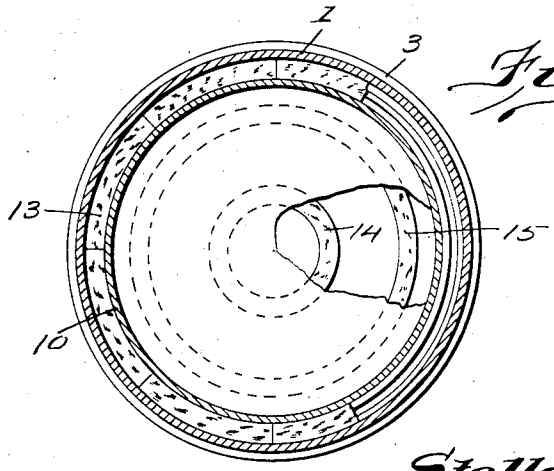


Fig. 2.

Witness

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UNITED STATES PATENT OFFICE.

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VACUUM-CAN.

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To all whom it may concern:

Be it known that I, STELLA C. LARSEN, a citizen of the United States, residing in the city of Washington, in the District of Columbia, have invented certain new and useful Improvements in a Vacuum-Can, of which the following is a specification.

This invention relates to shipping cans for milk.

The object of the invention is to provide a milk shipping can of the thermos or vacuum type which is simple in construction, cheap to manufacture and which will effectively retain its contents for twenty-four hours or more at the temperature at which it is placed in the can.

Another object is to provide a can of this character having combined spacing and packing elements for holding the inner and outer casings in operative position relatively to each other.

With these and other objects in view, the invention consists in certain novel features of construction as hereinafter shown and described, and then specifically pointed out in the claim, and in the drawings illustrative of the preferred embodiment of the invention.

In the accompanying drawing:

Figure 1 represents a vertical section through the outer member of the can with the inner member shown in side elevation and having parts broken out and in section, and,

Fig. 2 is a transverse section taken on the line 2—2 of Fig. 1.

In the embodiment illustrated, the can constituting this invention comprises an outer casing 1 preferably constructed of corrugated metal with an inner casing 10 conforming in shape thereto and arranged therein, said casing being of a size to provide a vacuum space 8. As shown these casings are integrally connected at their neck portions but obviously they may be separably connected.

The outer casing 1 has a rounded bottom 2 and is provided at its lower end with a base flange 3 to form a support for the can, the lower edge of said flange being here shown flush with the central portion of the bottom. This casing 1 has a reinforcing band 4 at its upper end provided at its upper edge with a downturned flange 5 to form a hand grip to facilitate handling of the can. The neck 6 of the casing 1 projects upwardly from the dome of the top 1^a thereof and is externally threaded as shown at 7 for connection with the threaded cap 17 which forms a closure for the can.

The casing 1 is provided on its inner face with a plurality of longitudinally spaced annular ribs 9 which are designed to reinforce the casing and to form one member of a supporting seat for combined packing and spacing rings 13 which fit between the casings and rest on the ribs 9 and on similar ribs 12 carried by the inner casing 10 and arranged directly opposite the ribs 9 as is shown clearly in Fig. 1. Any desired number of these combined packing rings and spacers 13 may be employed, four being here shown and they are preferably composed of cork or other suitable material.

Arranged between the bottoms of the inner and outer casings are two annular spacers 14 and 15 concentrically arranged and positioned suitable distances apart to provide proper supports for the inner casing and to form vacuum chambers between them.

Another combined packing ring and spacer is arranged between the tops of the two casings at the base of the neck portions thereof as is shown clearly in Fig. 1.

From the above description it will be obvious that the rings 13 are of a width to completely fill the space between the casings forming vacuum chambers between them and also operating to hold the two casings against lateral movement relatively to each other.

A can constructed as herein shown and described while very simple will operate effectively to retain the contents thereof for an indefinite period at the temperature at which they were placed within the can.

The preferred embodiment of the invention is disclosed in the drawings and set forth in the specification, but it will be understood that any modifications within the scope of the claim may be made in the construction without departing from the principle of the invention or sacrificing any of its advantages.

What I claim is:

A can of the class described comprising inner and outer casings connected to form a vacuum space around the inner casing *a* with combined packing and spacing rings

arranged at intervals between them and encircling the inner casing, said casings having oppositely disposed reinforcing peripherally arranged annular ribs on the upper faces of which said rings are seated, said rings being of uniform width throughout and corresponding in width to the distance between the casings to adapt them to operate as spacers and form vacuum chambers between them.

In testimony whereof, I affix my signature hereto.

STELLA C. LARSEN