

[54] **DUMMY CAN VEHICLE FOR AN INDICATOR DEVICE IN CANNED GOODS STERILIZING OR COOKING OPERATIONS**

[75] Inventors: **Vincent A. Romito**, North Hollywood; **Arthur W. Hanna**, Sunland, both of Calif.

[73] Assignee: **Sterilizer Control Royalties (a Trust)**, North Hollywood, Calif.

[22] Filed: **Jan. 14, 1972**

[21] Appl. No.: **217,865**

[52] U.S. Cl. **116/114 V, 53/78, 73/356, 99/342, 206/16.5, 220/83**

[51] Int. Cl. **G01d 21/00**

[58] Field of Search **116/114.5, 114 V, 116/114 AM; 99/342; 73/374, 375, 376, 377, 169, 356; 206/16.5; 40/11 A, 16, 19; 53/25, 78, 127; 113/7.8; 220/10, 116, 122, 1, 85, 83**

[56] **References Cited**

UNITED STATES PATENTS

1,123,556 1/1915 Krouetz 73/375 X

2,004,627	6/1935	Hoeflich	73/377
2,067,016	1/1937	Packer	73/378 X
2,201,186	5/1940	Lane	73/376
2,222,067	11/1940	Chaney et al.	116/114 R
2,641,930	6/1953	Kebbon	73/374 X
2,826,073	3/1958	Huyck et al.	116/114 V
3,568,627	3/1971	Sellinger et al.	116/114 V

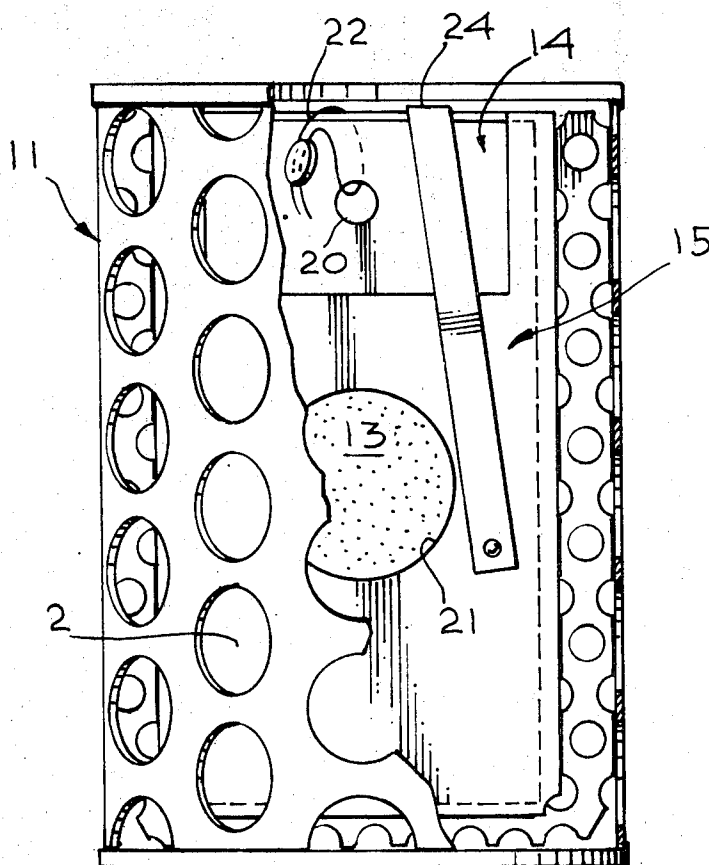
Primary Examiner—Louis J. Capozzi

Attorney—Miner L. Hartmann

[57] **ABSTRACT**

A dummy can vehicle for an indicator device for use in sterilizing or cooking operations in the canning industry, by which the heat treatment of the filled cans may be registered for inspection at the end of such treatment. The indicator device is specifically a color-change ink spot or marking on a card placed in a pocket-like container within said dummy can vehicle, which card may be viewed in the dummy can, and subsequently retained as a record of said can processing.

11 Claims, 6 Drawing Figures



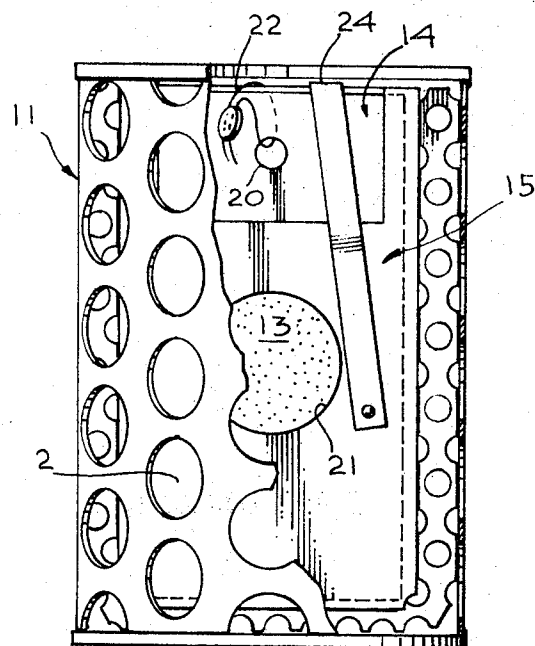


Fig. 1

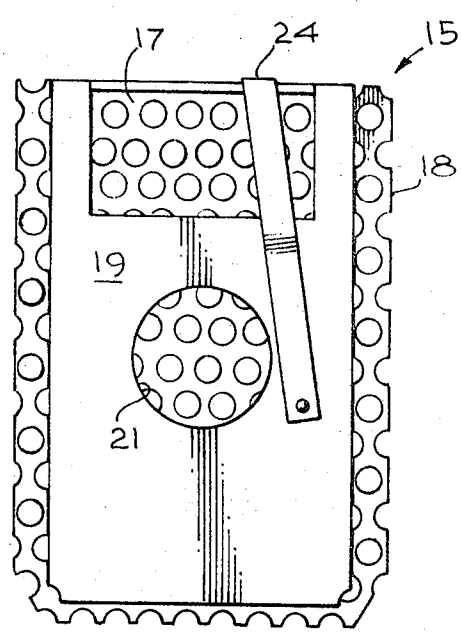


Fig. 4

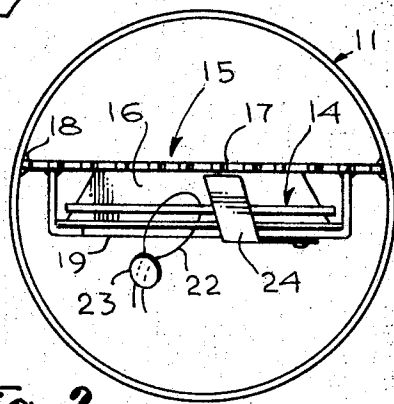


Fig. 2

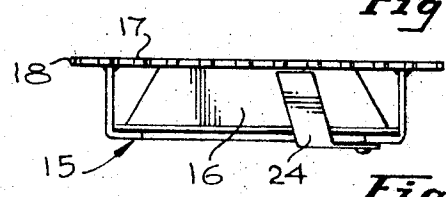


Fig. 5

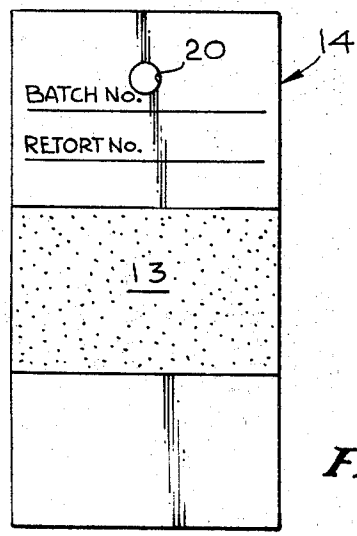


Fig. 3

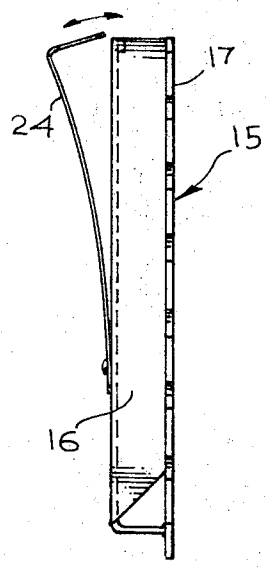


Fig. 6

DUMMY CAN VEHICLE FOR AN INDICATOR DEVICE IN CANNED GOODS STERILIZING OR COOKING OPERATIONS

BACKGROUND OF THE INVENTION

This invention relates to a dummy can vehicle for an indicator device in canned goods sterilizing or cooking operations. More specifically, it relates to means for holding color-change indicator cards which register the temperature effects adjacent the cans of a batch of sealed metal cans containing food products or the like which are heat treated in closed vessels to cook and/or sterilize the contents of said cans.

In the canning industry, various kinds of ovens, retorts, autoclaves and the like are commonly used, both for treating batches of sealed cans in baskets or trays, and for processing sealed cans by continuous movement of cans through zones of different temperatures and for selected times either by rolling the cans circumferentially along guided paths or by horizontal transport on belt conveyors or the like.

Among various means for checking the heat effects to which the cans have been subjected, it has long been customary to attach adjacent the cans, color-change cards having thereon tell-tale spots or lines of special ink compositions which permanently change in color corresponding to the previously determined time and temperature required to effect the cooking or the sterilization of the contents of the cans. These color indicator cards have heretofore usually been attached to the baskets or containers holding a batch of cans, or to transporting part of the conveyor, or sometimes the cards are merely laid on the cans. These cards are subject to loss or injury or destruction during the processing, and therefore fail to give the required information about the conditions of treatment of the sealed cans of food products.

SUMMARY OF THE INVENTION

One object of this invention is to provide dummy cans for holding tell-tale indicator cards which dummy cans are then subjected to the same heat treatment as the cans containing foods during cooking or steam sterilization processes. Another object of the invention is to provide means to hold the tell-tale indicator cards in simulated cans which are easily identified after the cans are discharged from the cookers. Another object is to provide dummy cans which are open-ended or well perforated in the ends and sides so that water does not accumulate in them during the processing. A further object is to provide means for securely holding the tell-tale cards in the dummy cans so that they cannot be surreptitiously or accidentally removed or changed at the end of the processing cycle. Another object is to provide protective pocket means for securely holding a color-change indicator card during cooking and steam sterilizing processing.

A further object is to provide a dummy vehicle can for holding an indicator card in a position where it will most accurately indicate the heat treatment to which the cans containing food or the like are subjected.

These and other objects are attained by our invention which is more fully explained in the following description of preferred forms, reference being made to the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a side elevation view, with parts broken away, showing assembly of the card holder and color-change card inside the perforated cylindrical dummy can of a preferred form of the invention;

FIG. 2 is a top plan view of the same;

FIG. 3 is a front face of a color-change card typical of those to be used in the dummy can;

FIG. 4 is a front side elevational view of the card holder means;

FIG. 5 is a top plan view of the card holder; and

FIG. 6 is a side elevational view of the card holder of FIG. 5

DESCRIPTION OF THE PREFERRED EMBODIMENTS

Referring to the drawings, a perforated metal cylinder body 11 has open ends, the perforations 12 being disposed over the entire surface of the can body, and the said openings permitting a partial view of the indicator ink portion 13 of the color-change card 14 when it is held within the holder 15. The card holder 15 is a rectangular pocket 16 attached to a partition member 17 which may be perforated sheet metal, which is attached inside the cylindrical body 11 by its vertical edges 18, preferably positioned diametrically. The attachment may be made by spot welding or soldering.

The pocket-like holder 16 is adapted to contain a color-change indicator card 14 of the type indicated particularly in FIG. 3, which shows an area 13 covered with color-changing ink, and having clear space for identifying insignia, and a hole 20 near the top of the card. The front face 19 of the pocket 16 is provided with a large sight opening 21 which coincides in part with the ink spot 13 on the card, all arranged so that the indicator ink on the card may be observed through the perforations 12 in the outer cylindrical body 11 of the dummy can.

A spring clip or card retainer means 24 is pivoted on the front face 19 of the card holder 15, for the purpose of removably retaining the card 14 within the holder during the heat processing of the dummy can.

Where it may be found necessary to prevent tampering, a wire 22 may be threaded through the hole 20 in the card and through one of the perforations in the partition member 17, and the ends thereof secured by a deformable lead seal 23. Other securing means may alternatively be used, such as strips of pressure sensitive tape.

The card holder 15 may be provided with the perforated partition member 17 of any desired width to fit dummy can cylinders 11 of varying diameter, and also the card holder with the partition member may be permanently attached to the baskets or racks used in processing a batch of cans of food product, thus preserving the indicator card during processing, where the use of the dummy cans is not desired or required.

The dummy can fitted with the card holder is particularly useful when the cans of food to be heat treated are conveyed by rolling through the heating equipment.

We claim:

1. A dummy can comprising a sheet metal hollow body simulating a metal container commonly used for containing food products and the like during cooking or sterilizing, and during subsequent storage; a metal partition attached lengthwise to the inside surface of

3

said body; and holder means attached to said partition for protectively holding a color change indicator card within said body, said holder having openings for circulation of vapor and drainage of water therefrom.

2. The dummy can defined in claim 1 in which the sheet metal of said body is perforated.

3. The dummy can defined in claim 2 in which the ends of the cans are open.

4. The dummy can defined in claim 2 in which said holder means is a metal pocket attached to one face of said metal partition.

5. The dummy can defined in claim 4 in which said metal pocket is provided with a sight opening disposed opposite said partition member whereby the color change card may be observed while inside said pocket.

6. The dummy can defined in claim 5 in which the perforations in said metal body are disposed to permit the reading from outside the body of the insignia on a color-change indicator disposed within said metal pocket.

7. The dummy can defined in claim 5 in which a card

4

retainer means is provided whereby to secure a color-change indicator card within said metal pocket.

8. A perforated sheet metal pocket for attachment to a dummy can, said can being adapted to be subjected to heat and steam processing during cooking or sterilizing operations in a cannery, said pocket having a cavity to receive a color-change indicator card, said pocket having a back plate adapted to be attached to a dummy can.

9. The device defined in claim 8, in which said pocket is provided with sight openings in its face opposite said back plate.

10. The device defined in claim 8, in which said pocket is provided with a card retainer means whereby to secure a color-change indicator card within said pocket.

11. A perforated metal dummy can device simulating a food-container can, said device having attached thereto means for securing a color-change indicator card to said dummy can.

* * * * *

25

30

35

40

45

50

55

60

65