(19) Europäisches Patentamt
European Patent Office
Office européen des brevets

(11) Publication number: **0 108 462 B1**

(12) # EUROPEAN PATENT SPECIFICATION

(45) Date of publication of patent specification: **22.01.92** (51) Int. Cl.[5]: **B65D 1/40**

(21) Application number: **83201583.8**

(22) Date of filing: **01.11.83**

(54) **Preserving tin.**

(30) Priority: **04.11.82 NL 8204283**

(43) Date of publication of application:
16.05.84 Bulletin 84/20

(45) Publication of the grant of the patent:
22.01.92 Bulletin 92/04

(84) Designated Contracting States:
BE CH DE FR GB IT LI NL SE

(56) References cited:
WO-A-81/02415
FR-A- 1 511 724
US-A- 3 117 873

(73) Proprietor: **Thomassen & Drijver-Verblifa N.V.**
Zutphenseweg 51 P.O. Box 103
NL-7400 GB Deventer(NL)

(72) Inventor: **Glerum, Johannes Adriaan**
No. 34, Ceintuurbaan
NL-7415 AM Deventer(NL)

(74) Representative: **Schumann, Bernard Herman Johan et al**
OCTROOIBUREAU ARNOLD & SIEDSMA
Sweelinckplein 1
NL-2517 GK The Hague(NL)

EP 0 108 462 B1

Description

The invention relates to a method of manufacturing a tin filled with food, the tin having a generally cylindrical circumferential outer surface and being provided with a bead, i.e. a deepened wall portion, extending around its circumference.

A method of this kind is known from US-A-3 117 873. This prior art reference relates to a method, in which the tin, after filling and closing, is compressed axially so long that the contents, particular granular or powdery products, such as coffee, provide the wall with an essential additional support. Clearly the strength and stability of this prior art tin is to a substantial degree obtained by a mechanical interaction of forces, i.e. the combination of the tin, the lid and the contents of the closed tin.

It is a purpose of the invention to provide a method of manufacturing a tin, the strength and stability of which is inherent only to the tin itself.

In view thereof, the method according to the invention is characterized in that prior to the closing of the tin by means of a lid, the edges of the bead are pressed substantially one against the other.

Also, the invention relates to a tin having a generally cylindrical circumferential outer surface and being provided with a bead, i.e. a deepened wall portion, extending around its circumference, the tin being manufactured with the method according to the invention.

The invention will now be explained with reference to the drawing showing an arbitrary embodiment.

Figure 1 is a cylindrical preserving tin having a bead extending around its circumference;

Figure 2 is a detail II of Figure 1;

Figure 3 is the tin of Figure 1 in the state in which the edges of the bead 2 are substantially pressed against each other; and

Figure 4 shows the detail IV from Figure 3.

Figure 1 shows a cylindrical preserving tin 1 having a cylindrical wall 3 provided with a bead 2 around its circumference.

Figure 2 shows the bead 2 on an enlarged scale. The arrows 4 indicate the distance between the edges of the bead 2.

Figure 3 shows the same tin 1. However, in the condition shown in Figure 3 the edges of the bead 2 are pressed towards one another. In order to indicate the difference with Figure 1 the bead 2 is designated by reference numeral 2'. The pressing of the edges towards each other has taken place by exerting an axial force on the tin prior to the closing of the tin by means of a lid.

Figure 4 shows the bead 2' on an enlarged scale. The distance 4' between the edges is appreciably smaller than the distance designated by 4 in Figure 2, as will be apparent from a comparison between the Figures 2 and 4. When stacking a plurality of tins, the edges can be pressed against one another, so that the axial resistance becomes equal to that of a tin which is not provided with a bead 2. The presence of a bead, however, is of vital importance to improve the tin's resistance to collapse, that is to say to exhibit indentations in the body resulting from e.g. the sub-atmospheric pressure occurring in the tin after filling products in the hot state, closing the tin and cooling the tin down. The bead, in that case, serves as a reinforcing element. The resulting reduction of the axial stability is according to the invention avoided by pressing the edges of the bead substantially one against the other. This explains the reason why the axial resistance in this case becomes equal to that of a tin not provided with a bead.

It is noted that the distance 4' may even be zero. For obtaining a satisfactory stackability, it is, however, sufficient for the edges to be relatively near one another, so that when a stack is formed, the edges are pressed against one another.

The invention is not limited to a preserving tin with only one recess of the kind described. Other numers of recesses may be used. Other bead-shapes provide the same result. Therefore, the invention is not limited to the shape shown in the drawing.

Claims

1. A method of manufacturing a tin (1) filled with food, the tin (1) having a generally cylindrical circumferential outer surface and being provided with a bead (2), i.e. a deepened wall portion, extending around its circumference characterized in that prior to the closing of the tin (1) by means of a lid, the edges of the bead (2) are pressed substantially one against the other.

2. A tin (1) having a generally cylindrical circumferential outer surface and being provided with a bead (2), i.e. a deepened wall portion, extending around its circumference, the tin being manufactured with the method according to claim 1.

Revendications

1. Procédé de fabrication d'un boite en ferblanc (1) remplie d'un produit alimentaire, cette boite (1) ayant une surface circonférentielle externe qui est dans son ensemble cylindrique et comporte un congé (2), c'est à dire une partie de paroi plus profonde, qui s'étend autour de sa

circonférence, caractérisé en ce qu'avant la fermeture de la boite (1) avec un couvercle, les bords du congé (2) sont pressés l'un contre l'autre de façon notable.

2. Boite en fer-blanc (1) ayant une surface circonférentielle externe qui est dans son ensemble cylindrique et présente un congé (2), c'est à dire une partie de paroi plus profonde, qui s'étend autour de sa circonférence, ladite boite étant fabriquée au moyen du procédé tel que défini suivant la revendication 1.

Patentansprüche

1. Verfahren zum Herstellen einer mit einem Nahrungsmittel gefüllten Konservendose (1) mit einer im wesentlichen kreiszylinderförmigen äußeren Oberfläche und ausgestattet mit einer Sicke (2), d.h. mit einem vertieften Wandabschnitt, der sich rund um den Umfang erstreckt,
dadurch gekennzeichnet,
daß vor dem Verschließen der Dose (1) mit einem Deckel die Kanten der Sicke (2) im wesentlichen gegeneinandergepreßt werden.

2. Konservendose (1) mit einer im wesentlichen kreiszylinderförmigen Oberfläche und ausgestattet mit einer Sicke (2), d.h. mit einem vertieften Wandabschnitt, der sich rund um den Umfang erstreckt, welche Konservendose entsprechend dem Verfahren nach Anspruch 1 hergestellt worden ist.

FIG. 2

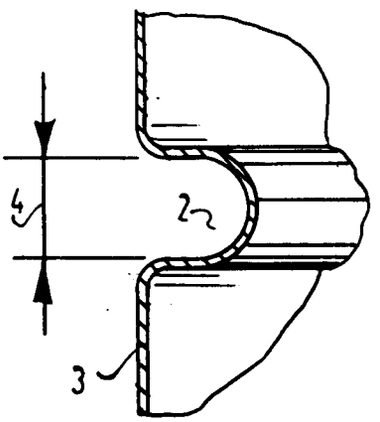

FIG. 4

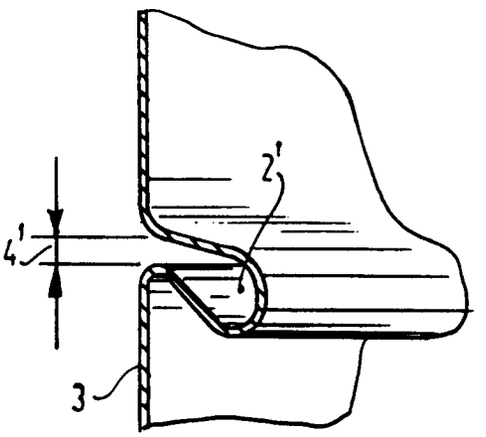

FIG. 1

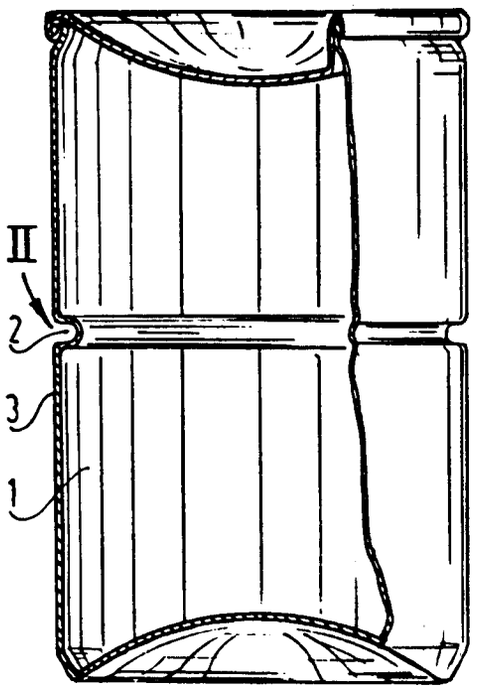

FIG. 3