

PATENT SPECIFICATION

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DRAWINGS ATTACHED.

Inventor:—JOHN EDWARD COOK.

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COMPLETE SPECIFICATION.

Improvements in Can Ends.

We, THE METAL BOX COMPANY LIMITED, a Company Incorporated under the laws of Great Britain, of 37, Baker Street, London, W.1, England, do hereby declare the invention, for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement:—

This invention relates to can ends in particular to can ends which include a panel provided with a tab secured to a removable portion which on pulling of the tab is removed to permit dispensing of the contents of a can to which the end is fitted.

Because of the difficulty of making controlled score lines in tinplate for the purpose of defining the removable portion, and of securing a tab to tinplate, it is now usual for a dispensing type can end to be made of a metal such as aluminium or aluminium alloy. Such material is, however, expensive and sometimes unacceptable as compared with tinplate and efforts have been made to produce a bi-metallic can end consisting of a tinplate end which includes a panel having formed therein an opening closed by an aluminium closure member. The bi-metallic ends as at present known are, however, difficult to manufacture, need expensive special equipment for their manufacture, and use closure members provided with a tab which is unitary with the closure member, thus making it difficult to ensure that there is no leak between the junction of the tab and closure member and the edge of the opening in the panel of the can end.

It is a main object of the present invention to provide a bi-metallic can end which can have the closure member applied thereto in an easy manner, ensuring a leak-proof joint and so designed that the closure member can

be scored and tab fitted with conventional tab fitting machines.

According to the invention, there is provided a can end made of tinplate and including a panel having formed therein an opening closed by a closure member of soft metal, such as aluminium or an aluminium alloy, adhesively secured to the underside of the panel, said closure member being provided with score lines defining a removable portion to which is secured a tab by which said portion can be removed by tearing along the score lines.

In order that the invention may be clearly understood, one embodiment thereof will now be described, by way of example, with reference to the accompanying drawings, in which:—

Fig. 1 is a top plan of a can end according to the invention prior to the scoring of the closure member and to the application of a pull-tab to the closure member,

Fig. 2 is an underneath plan of Fig. 1,

Fig. 3 is a section on line III—III, Fig. 1,

Fig. 4 is a top plan of the can end with the closure member scored and having a pull tab applied thereto, and

Fig. 5 is a section on line V—V, Fig. 4.

Referring to the drawings, the can end is of conventional configuration and includes, as is customary, a panel 1, a peripheral curled flange 2 by which the end is seamed to a can body, and a channel 3 in which is disposed a sealing compound 4, Fig. 5.

The can end is made of tinplate and has an opening 5 closed by a closure member 6 of metal, such as aluminium or aluminium alloy, the closure member being secured to the underside of the can end by any suitable adhesive 7. The adhesive is an organic adhesive with a suitable combination of properties in

[Price 4s. 6d.]



respect of strength, adhesion to the metallic surfaces, and non-toxicity, and may, for example, be a thermo-curing adhesive comprising an epoxy resin with a suitable plasticizer and hardener, or it may be a thermoplastic adhesive of the nylon type which can be applied as a thin strip between the can end and the closure member. The surfaces of the panel 1 and closure member 6 may be pre-lacquered with a vinyl-based lacquer, such as that sold under the Trade Mark "VINYLITE", preparatory to the application of the plastisol.

The opening 5 extends inwards from a position 8, Fig. 1, adjacent to an edge of the panel 1, and ribs 9, as can be seen from Fig. 3, may be introduced to protect the lips of a person drinking from the can. The securing of the closure member 6 to the panel 1 in the manner just described ensures that the opening is closed in a leak-proof manner.

As can be seen from Fig. 1, the end 10 of the opening which is remote from the edge of the panel 1 is of arcuate form facing the opposite end 8 of the opening.

When the closure member 6 has been secured to the can end as shown in Figs. 1 to 3 the closure member is provided with score lines 11, Fig. 4, which define a removable portion 12 to which a pull-tab 13 is secured. The score lines are formed in known manner and the tab 13 is secured to the portion 12 in any desired known manner, for example by riveting 14.

The can end as described with reference to Figs. 1 to 3 can be handled and treated in the manner of an end which does not have an opening closed by a closure member and because of this it is possible to effect scoring of the closure member 6 and the securing of the pull-tab 13 thereto by equipment which is basically the same as that known and used

for scoring and applying tabs to can ends made wholly of aluminium.

The ribs 9 terminate at position 15 spaced from the end 10 of the opening 5 and the tab 13 is secured to the portion 16, Fig. 1, of the closure member 6 which extends between the end 10 of the opening and the ends 15 of the ribs 9.

As shown in the drawings the can end is of circular form but it will be understood that it may have a form other than circular, for example it may be rectangular.

WHAT WE CLAIM IS:—

1. A can end made of tinplate and including a panel having formed therein an opening closed by a closure member of soft metal, such as aluminium or an aluminium alloy, adhesively secured to the underside of the panel, said closure member being provided with score lines defining a removable portion to which is secured a tab by which said portion can be removed by tearing along the score lines.

2. A can end according to Claim 1, wherein the score lines defining the removable portion are formed after the closure member has been secured to the end.

3. A can end according to Claim 1 or Claim 2, wherein the tab is riveted to the removable portion.

4. A can end according to any one of Claims 1 to 3, wherein the can end is of circular form.

5. A can end substantially as herein described with reference to, and as illustrated in the accompanying drawings.

PAGE, WHITE & FARRER,

Chartered Patent Agents,

27, Chancery Lane,

London, W.C.2.

Agents for the Applicants.



VINYLITE

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