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K. V. MARTIN

3,250,424

CAN END WITH SLIDABLE PIERCER

Filed July 2, 1964

FIG. 1.

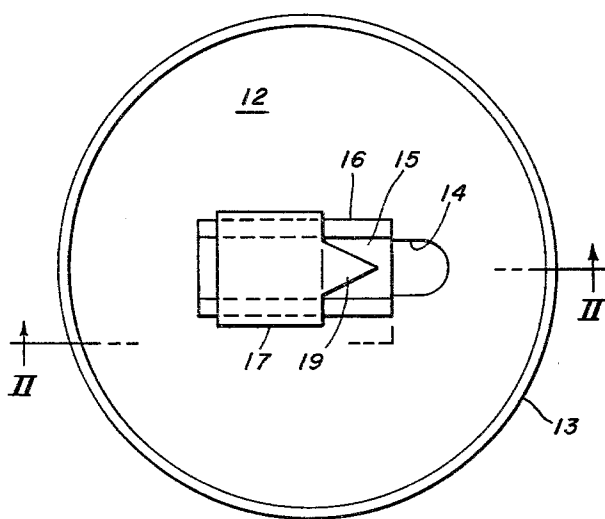


FIG. 2.

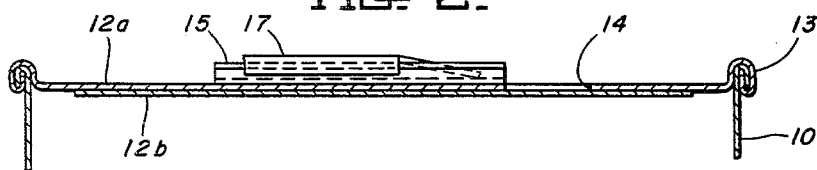


FIG. 3.

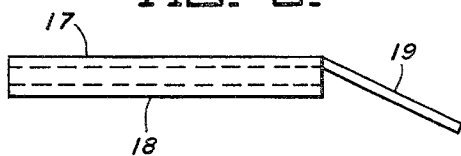
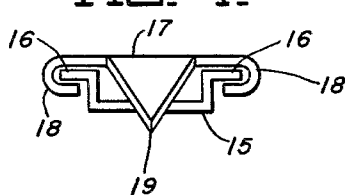


FIG. 4.



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1

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## CAN END WITH SLIDABLE PIERCER

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1 Claim. (Cl. 220-48)

This invention relates to an improved can-end construction which facilitates opening the can.

An object of the invention is to provide a can end which carries a slidable piercer for opening the can without need for any sort of tool.

A more specific object is to provide a can end which is formed of a relatively heavy gauge outer ply and a lighter gauge inner ply, said outer ply carrying a slidable piercer for puncturing the inner ply to remove liquid contents of a can.

In the drawing:

FIGURE 1 is a plan view of a can end constructed in accordance with my invention;

FIGURE 2 is a section on line II-II of FIGURE 1;

FIGURE 3 is a side elevational view of the piercer; and

FIGURE 4 is an end elevational view of the piercer and its slideway.

The drawing shows a sheet metal can of tinplate or the like which is conventional apart from my improved end construction. The can includes a body 10 shown as cylindrical and an end 12 joined to the body around its periphery with the usual seam 13. The end has a relatively heavy gauge outer ply 12a and a lighter gauge inner ply 12b fixed to the inside face of the outer ply. For example, I can form the body 10 and the outer ply 12a of 107-pound basis-weight tinplate and the inner ply 12b of 30-pound basis-weight tinplate. The outer ply has an opening 14 near one edge through which a small area of the inner ply is exposed.

I fasten a channel-shaped slideway 15 to the outside face of the outer ply 12a, as with solder or adhesive. The edges of the flanges of the slideway have outwardly projecting lips 16. The slideway extends approximately along a diameter of the can and terminates adjacent the opening 14. A piercer 17 is slidably mounted on the slideway 15, and has intumed flanges 18 along its edges to receive the lips 16. The end portion of the piercer is bent toward the plies 12a and 12b of the can end and pointed, as indicated at 19. I form the slideway and

2

piercer of tinplate or the like, the same as the can, but the piercer should be of heavier gauge metal than the inner ply 12b. 90-pound basis-weight tinplate is satisfactory for the piercer.

To open the can, I push the piercer 17 along the slideway 15 until the point 19 reaches the opening 14 in the outer ply 12a. The point then punctures the inner ply 12b through the opening. I slide the piercer back after puncturing the inner ply, enabling liquid contents of the can to be poured through the puncture. However the piercer always remains affixed to the can, and it does not contact the contents except during the opening operation.

While I have shown and described only a single embodiment of my invention, it is apparent that modifications may arise. Therefore, I do not wish to be limited to the disclosure set forth but only by the scope of the appended claim.

I claim:

A can end comprising inner and outer sheet metal plies, said outer ply being of heavier gauge than said inner ply and having an opening exposing a portion of said inner ply, which portion is small relative to the area of the can end, a channel-shaped slideway fixed to said outer ply extending from adjacent said opening and having lips which project outwardly from its flanges, and a piercer slidably mounted on said slideway and having intumed flanges receiving said lips, said piercer having a point at one end bent toward said plies and adapted to puncture said inner ply through said opening as the piercer is moved along said slideway toward the opening.

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