Dec. 8, 1936. C. R. COOPER 2,063,013

PACKING CAN

Filed Sept. 19, 1934

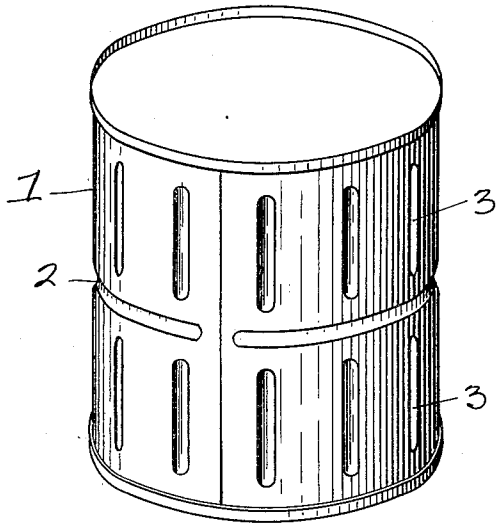


Fig. 1.

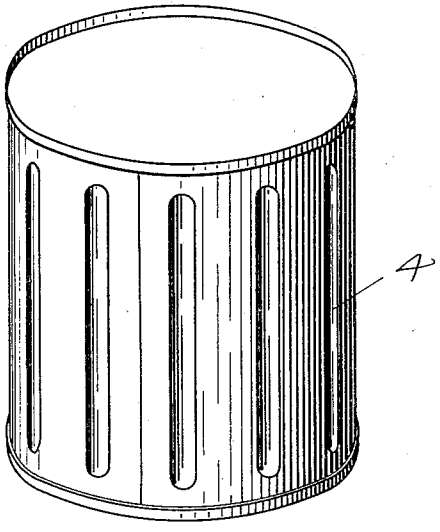


Fig. 2.

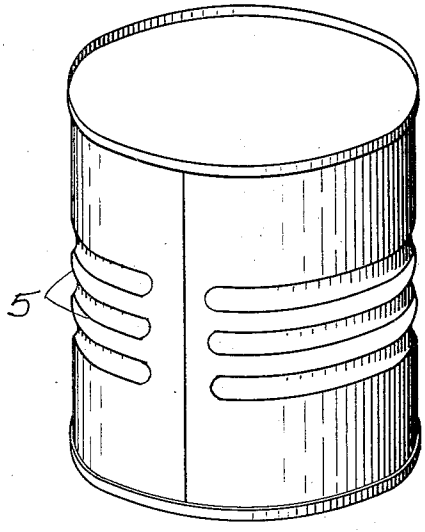


Fig. 3.

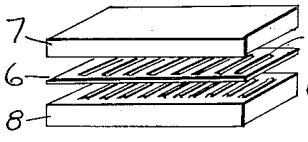


Fig. 4.

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PACKING CAN

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Application September 19, 1934, Serial No. 744,706

1 Claim. (Cl. 220—72)

This invention relates particularly to a packing can for food stuffs and other commodities, of the conventional cylindrical shape, having internal corrugations, ribs or embossments formed in the walls or body of the can to stiffen and strengthen the same against deformation, from either external or internal forces or pressures.

A further object of the invention is to provide a packing can, having internal corrugations, ribs or embossments therein to present a smooth and unobstructed surface which will permit the application thereon of a flat paper label, of the kind in general commercial use, by manual or mechanical methods, which cannot now be done where external corrugations, ribs or embossments are provided on the can body.

Other objects and advantages are to provide a packing can that will be superior in point of simplicity, economy of construction, positiveness of operation, and convenience in use and general efficiency.

In this specification and the annexed drawing the invention is illustrated in the form considered to be the best, but it is to be understood that the invention is not limited to such form, because it may be embodied in other forms; and it is also to be understood that in and by the claim following the description, it is desired to cover the invention in whatsoever form it may be embodied.

In the accompanying drawing:

Fig. 1 represents a perspective view of a cylindrical container having internal corrugations, ribs or embossments arranged in the body thereof, in accordance with my invention.

Fig. 2 is a perspective view of a cylindrical container having a modified form of internal corrugations, ribs or embossments applied thereto.

Fig. 3 is a perspective view of a cylindrical container having a modified form of internal corrugations, ribs or embossments applied thereto.

Fig. 4 is a diagrammatic view of a pair of stamping dies for forming the stiffening ribs in a can blank.

The conventional cylindrical can body is not susceptible of withstanding excessive forces or pressures without distortion of its normal shape and appearance. The usual can deformation results from either a pressure without, or vacuum within the can, generated either by the commodity in the can, or during the process of placing the commodity in the can. With my invention I form a can body with internal corrugations, ribs or embossments therein which stiffen and strengthen the can body to an extent whereby it will resist forces and pressures greatly in excess of those which may be withstood by a conventional cylindrical can constructed of the same weight and strength of tinplate. Likewise, with my invention, it is possible to use a lighter weight can plate to maintain the same strength of can body as at present, with a consequent saving in the cost of the material of the can body.

In Fig. 1 of the drawing I have shown a cylindrical can body designated by the numeral 1, which can body has its opposite ends closed or capped in a conventional manner. The body 1 has an annular corrugation, embossment, or rib 2, provided therearound, and extending inwardly into the can, and it is also provided with internally extended and vertically disposed embossments, corrugations or ribs 3 in spaced circumferential relation therearound. The width, depth and length of the internal embossments, corrugations or ribs may be considerably different from those shown in the drawings, but would be so arranged that the width and depth would not interfere with the label receiving surface of the body of the can; and the length would not interfere with the side seaming, top seaming and bottom seaming mechanical operations usual in can manufacturing. The internal embossments, corrugations or ribs 2 and 3 add greater stiffness and strength to the body of the can when contrasted with a can body not so embossed, corrugated or ribbed, and likewise create a greater resistance to expansion or contraction, depending upon whether or not a pressure or partial vacuum is created within or without the can, with a consequent minimization of distortion or deformation.

In Fig. 2 the can body is provided with vertically disposed internal embossments, corrugations or ribs 4, which are arranged in spaced circumferential relation around the can, and which function in precisely the same manner as the internal embossments, corrugations or ribs referred to in Figure 1. Likewise, in Fig. 2 the internal embossments, corrugations or ribs are so arranged that neither the label receiving surface of the can body nor the seaming operations are interfered with.

In Fig. 3, I have provided a plurality of internal annular embossments, corrugations or ribs 5 around substantially the center of the can body, although, obviously, the said internal embossments, corrugations or ribs might be disposed elsewhere on said can body. The internal annular corrugations, embossments or ribs 5 likewise function in the same manner as the internal embossments, corrugations or ribs referred to in

Figure 1. Likewise in Figure 3 the internal embossments, corrugations or ribs are so arranged that neither the label receiving surface of the can body nor the seaming operations are interfered with.

In Fig. 4, I have diagrammatically illustrated a can blank 6 and forming dies 7 and 8, wherein the horizontal and/or vertical internal embossments, corrugations or ribs terminate short of the end and side seams of the can body. Said internal embossments, corrugations or ribs 9 are stamped in the tin plate or blank forming the can body before the can body is formed, thus leaving a smooth, flat marginal surface around all four edges of the tin plate, thus making it possible to make up complete cans by use of the present or any improved mechanical contrivances for forming and side-seaming the can bodies and also affixing the can tops and can bottoms in the conventional use, or otherwise, of double seamers.

Having thus described this invention, what I claim and desire to secure by Letters Patent is:

A relatively small cylindrical container intended to be hermetically sealed consisting of a can body formed of a single sheet of material rolled into cylindrical form, its side edges forming a lock seam for the formation of the can body; and its top and bottom edges together with the outside edges of the can top and bottom forming a double seam, said body sheet having a laterally disposed, internally embossed stiffening corrugation on the outer surface thereof, the ends of said corrugation being spaced inwardly from the margin of the side edges of the body plate or sheet, and relatively narrow, vertically disposed, internally embossed stiffening corrugations spaced from one another to provide relatively wide and smooth areas therebetween, said corrugations extending between and spaced inwardly from said first mentioned corrugation and the top and bottom edges of the body sheet thereby permitting the formation of the body side lock seam and the top and bottom double seams in conjunction with the outside edges of the can top and can bottom, and provide a relatively smooth unobstructed label receiving surface on the outside of said can body.

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