Nov. 1, 1932. M. L. DODGE ET AL 1,886,171

METHOD OF NESTING CAN BODIES

Filed March 21, 1930

Fig. 1

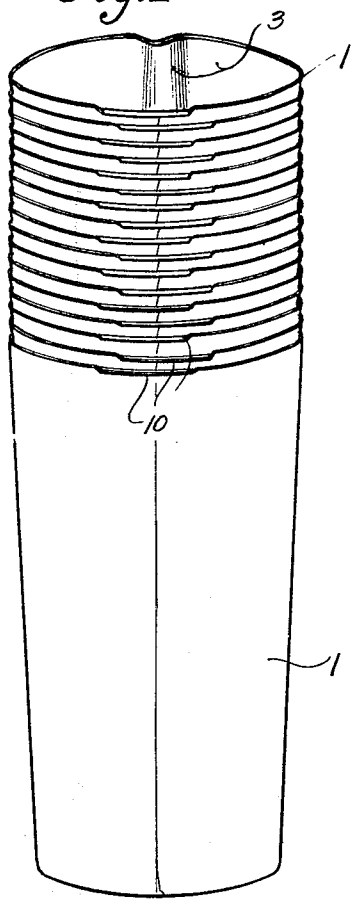


Fig. 2

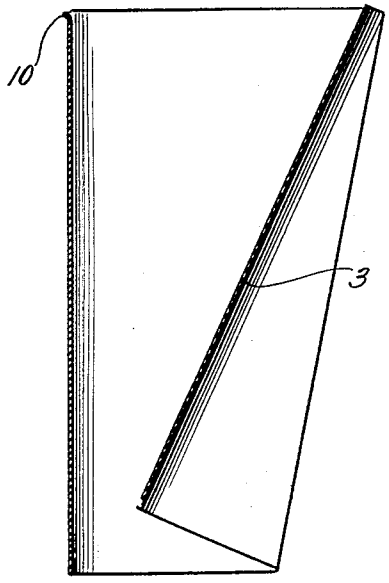


Fig. 3

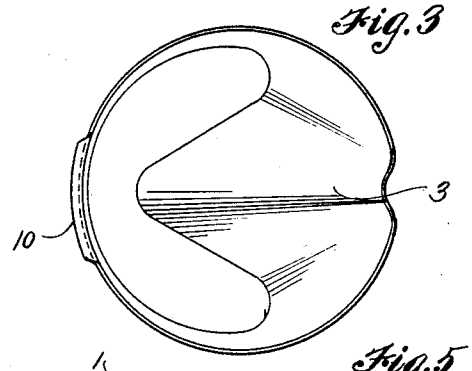


Fig. 4

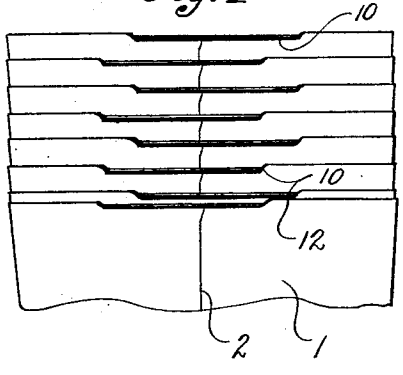
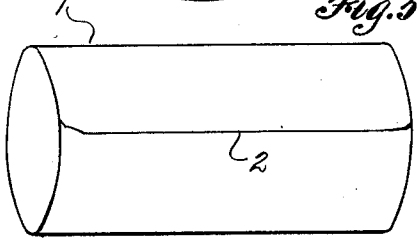


Fig. 5



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UNITED STATES PATENT OFFICE

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METHOD OF NESTING CAN BODIES

Application filed March 21, 1930. Serial No. 437,914.

This invention relates to can bodies and a method of nesting them for shipment or storage; the invention being in the nature of an improvement on the method of nesting can bodies disclosed in the patent of Norbert J. Schaal, Number 1,755,666, dated April 22, 1930.

Explanatory to the present invention, it will be here stated that its purpose has been to devise means of overcoming the great expense of shipping can bodies in their original cylindrical form which requires considerable more space for packing them than the actual volume of the can bodies. By the present invention, the can bodies are completed and the side edges thereof are permanently seamed. It is essential that the can bodies be thus completed before shipment so that when they reach their destination, it will not be necessary to pass the body blanks through a machine for seaming. Applicant's invention therefor is particularly applied to a can body and means of shaping the same so that the cylindrical can body may be shipped and then restored to its normal shape for use.

According to the method disclosed in the Schaal application above referred to, the cylindrical can bodies, after being seamed and soldered, are deformed by striking a tapered channel in the body wall extending from one end to a point near the other, thereby tapering the bodies so that they may be nested one within the other. While the above method is satisfactory in so far as the nesting is concerned, the bodies, due to jar and vibration in shipment, become so tightly wedged together as to cause great difficulty in separating them; also, the termination of the inwardly struck channel a short distance from one end of the body forms a kink, and these kinks are difficult to smooth out in reforming the bodies.

In view of the above the present invention has for its object to so form the can bodies that they may be more compactly nested together than by the Schaal method, and also to provide the bodies with means whereby they may be easily separated and which serves as a stop for limiting the extent to which they may be telescoped together.

More specifically stated, the present invention resides in the method of nesting can bodies, which consists of forming each with an inwardly struck, tapered channel extending throughout the length of the body wall, and whereby said bodies are tapered to permit their being fitted telescopically one within another, and wherein each body is provided at its larger end with an outturned flange which operate, when the bodies are nested, to limit the extent to which they may telescope together, and which serve additionally as abutments against which a tool may engage in the mechanical separation of the bodies for reforming.

Other objects of the invention reside in the various details in the formation of the bodies, and in the method of assembling them to form a can pack, as will hereinafter be described.

In accomplishing these objects of the invention, we have provided the improved details of construction, the preferred forms of which are illustrated in the accompanying drawing, wherein—

Figure 1 is a perspective view of a pack of can bodies formed in accordance with the details of the present construction.

Figure 2 is a sectional view of one of the can bodies taken in the plane of its axis and through the inwardly struck channel.

Figure 3 is an end view of the can body.

Figure 4 is an enlarged detail, illustrating the flanging of the bodies and the relationship of the flanges in the pack.

Figure 5 is a perspective view of a can body in reformed condition.

Referring more in detail to the drawing—

1 designates a can body designed to be of cylindrical form and which is made from a single rectangular blank of tin, having its ends joined together in a permanent seam 2 that extends lengthwise of the body. At the side of the body, directly opposite the seam, is an inwardly struck wall portion 3 in the form of a tapered channel which is formed by striking the side wall of the body inwardly, by a suitable tool, toward and through the longitudinal axis from one end of the body to the other; the channel at one end being substantially as deep as the diameter

of the can will permit, and at its other end, just passes below the periphery of the can body rim. This manner of deforming of the bodies gives each a gradually decreased diameter from one end to the other and provides that the cans may be telescopically nested one within the other, as is illustrated in Figure 1. The base of the channel portion is evenly rounded and the side walls thereof likewise are rounded off into the body wall so that no creases or indentures are formed in the material that would be difficult to smooth out when the body is reformed for use.

The deforming channel, at one end of the body extends through an arc of approximately one hundred ten degrees and, is gradually converged in the lengthwise direction of the body and passes just within the periphery of the body at its opposite end.

At their larger ends, each of the deformed bodies is provided across the seam with an outwardly formed flange 10 and the flanges of successive cans in the pack are offset, or in staggered relation with respect to each other so that they will not nest together, but will serve as means for limiting the extent to which the bodies may be telescoped together. These flanges also serve as abutments against which a tool may be applied for the mechanical separation of the cans from the pack. Ordinarily the bodies are not telescoped to such extent that the flanges come together in the pack, but are spaced, as shown in the upper portions of Figure 4. However, should they become more closely nested, a portion of the rim or edge of one can, closely adjacent its flange, will abut against the outturned flange of the enclosed can in the manner as indicated at 12 in Figure 4 to positively limit the extent to which they may telescope together. It is manifest that should the flanges be all of the same length and in registration with each other, they could nest completely together, but by offsetting the flanges in the manner shown, this is prevented.

By following the above method of deforming the bodies, it is possible to nest them one within the other and many more cans may be packed in a given space than is possible if they are not so deformed and nested, and the economy in space, both in shipment and in storage, is readily apparent.

It is further apparent that by this method, no damage is done to the seam of the can and that since at no point is the body dented or bent abruptly, it may be easily and readily straightened out to its original cylindrical form for receiving the ends.

Having thus described my invention what I claim as new therein and desire to secure by Letters Patent is:

1. A can body pack comprising a plurality of cylindrical can bodies, each having its edges joined in a permanent side seam, and each can body having the wall thereof curved inwardly on an axis extending lengthwise of the can body whereby said can body is deformed so as to give thereto a diameter which gradually increases from one end thereof toward the other for permitting the can bodies to be nested one within the other, each can body at the large end thereof having the edge thereof turned outwardly throughout a portion of its length to form a substantial right angle flange for limiting the extent to which one can body can be forced into another and to aid in the separating of the can bodies when the pack is disassembled.

2. A can body pack comprising a plurality of cylindrical can bodies, each having its edges joined in a permanent side seam, and each can body having the wall thereof curved inwardly on an axis extending lengthwise of the can body whereby said can body is deformed so as to give thereto a diameter which gradually increases from one end thereof toward the other for permitting the can bodies to be nested one within the other, each can body at the large end thereof having the edge thereof turned outwardly throughout a portion of its length to form a substantial right angle flange for limiting the extent to which one can body can be forced into another and to aid in the separating of the can bodies when the pack is disassembled, the flanges on successive can bodies in the pack being staggered to facilitate the separation of the can bodies.

Signed at Seattle, Washington, this 18th day of February, 1930.

MERTON L. DODGE.
PAUL E. PEARSON.