Aug. 21, 1951 E. R. ERICKSON 2,565,299

BOTTOM MEMBER FOR MILK BOTTLE CARRYING CASES AND THE LIKE

Filed Jan. 12, 1948

Fig. 1.

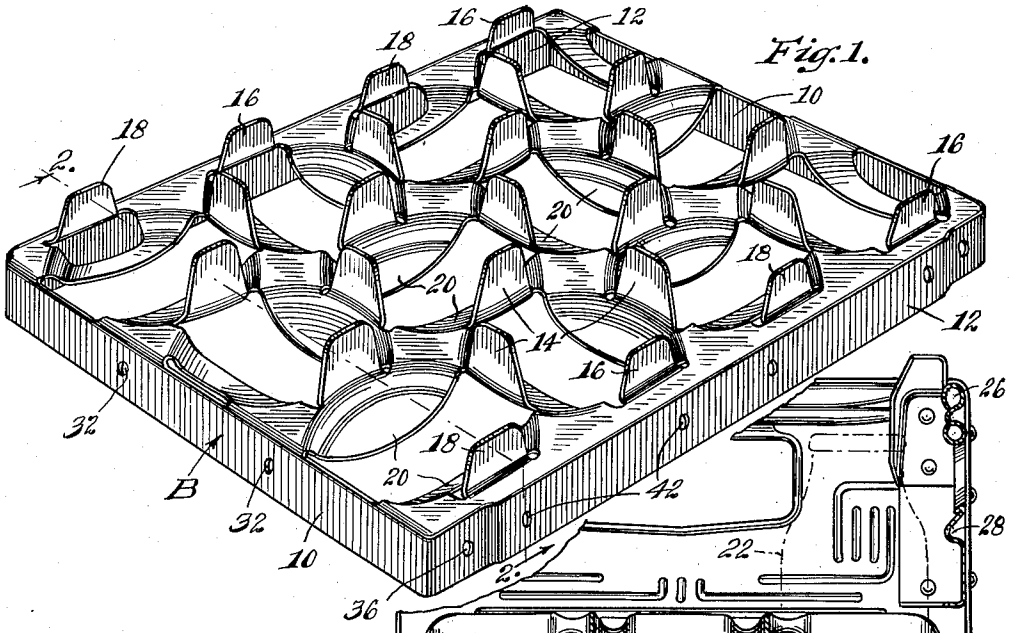


Fig. 2.

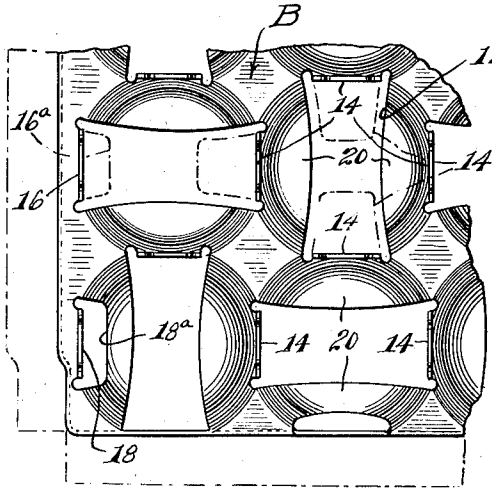


Fig. 3.

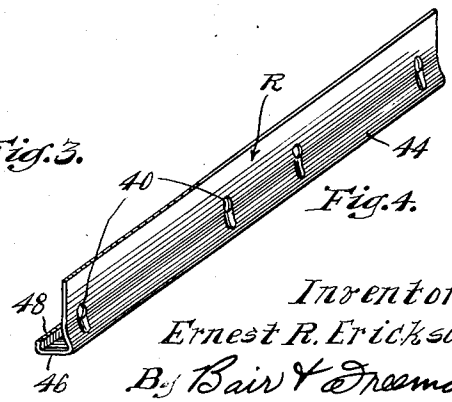


Fig. 4.

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BOTTOM MEMBER FOR MILK BOTTLE CARRYING CASES AND THE LIKE

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4 Claims. (Cl. 220—21)

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This invention relates to a bottom member for bottle carrying cases such as those designed for carrying milk bottles and of the general type shown in my copending application, Serial No. 716,122, filed December 13, 1946, now Patent No. 2,512,855, issued June 27, 1950.

One object of the present invention is to provide a bottom member which may be made of aluminum or other suitable sheet metal all in one piece with portions of the bottom member cut therefrom and bent up to provide positioning flanges for the bases of the milk bottles, and having socket members to snugly receive the bottles.

Another object is to provide a bottom member which may be readily formed and then connected with side and end walls to form a complete milk bottle carrying case, the manner of connection being by means of rivets or the like.

A further object is to provide a bottom member which may be made of a sheet of metal with the terminal edges turned downwardly to form flanges that reinforce the bottom member, and with portions of the sheet cut out so that certain remaining portions may be bent up to form positioning or separating flanges for the bottles that eventually rest on the bottom member and other portions may be depressed to form seats or sockets to receive the bottles.

Still a further object is to provide means for protecting the sides of the bottom member in the form of reinforcing rails attached to the flanges thereof and formed with outwardly projecting beads longitudinally thereof to serve as strike members when a plurality of the cases are stacked side by side and as a protecting means for the lower edges of the bottom member when the carrying cases are stacked on a hand truck.

With these and other objects in view, my invention consists in the construction, arrangement and combination of the various parts of my device whereby the objects contemplated are attained, as hereinafter more fully set forth, pointed out in my claims and illustrated in the accompanying drawings, wherein:

Figure 1 is a perspective view of a bottom member embodying my invention.

Figure 2 is a vertical sectional view through a milk bottle carrying case of the general type shown in my copending application and showing my bottom member associated therewith, the bottom member being taken on the line 2—2 of Figure 1.

Figure 3 is a plan view of one corner of the bottom member, and

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Figure 4 is a perspective view of the reinforcing rail used in connection with the bottom member.

On the accompanying drawing I have used the reference character B to indicate in general the bottom member constituting the present invention and R the reinforcing rail used in connection therewith. The bottom member B consists of a sheet of metal such as aluminum or the like, which is initially flat and is cut and formed in a punch press so as to assume the final shape shown in Figure 1. The marginal ends are turned down as at 10 and the marginal sides are turned down as at 12 to form reinforcing elements for the otherwise flat sheet.

A series of separating flanges 14 are cut from the sheet and turned up as illustrated, and along the sides somewhat shorter flanges 16 are cut and turned up in a similar manner. Referring to Figure 3, the initial shape of the flange 14 is shown at 14a and the initial shape of the flange 16 is shown at 16a. In other words, H-shaped openings 17 are cut in the sheet and each opening forms a pair of long flanges 14 or a long flange 14 and a short flange 16 as the case may be when these flanges are bent up from the plane of the sheet. Also at each corner there is a short flange 18 similarly formed from an opening 18a of the sheet.

For each bottle the sheet is then depressed at two places indicated as 20. These depressions may be of suitable shape and depth so as to snugly receive the base of a milk bottle indicated by dot and dash lines at 22 in Figure 2. The bottles are thus individually positioned on the bottom member and are additionally positioned by means of a divider element D shown in Figure 2 and illustrated and described in detail in my copending application. That application also refers in greater detail to end plates 24 and side rails 26 and 28 all of which are riveted together and riveted to the flanges 10 of the bottom member B by means of rivets 30. The flanges 10 are perforated at 32 to receive these rivets. The end members 24 are provided with flanges 34 which are riveted to the flanges 12 of the bottom member at the rivet openings 36.

The flanges 12 are subject to bending particularly when the cases are stacked side by side, when they are stacked on a truck and when the cases are slid across the dairy floor or a truck floor. To reinforce the flanges and take up this wear, I provide the rails R which are riveted by means of rivets 38 passing through openings 40 of the rails and openings 42 of the flanges 12.

Each rail R is provided with a longitudinal

bead 44, a bottom flange 46 and an upturned flange 48. The bead takes much of the wear and impact off the flange 12, the flange 46 takes the wear due to the weight of the milk bottle carrying case and its contents, and the flange 48 reinforces the rail R against undesirable bending.

The bottom member disclosed provides a rugged support in the carrying case for the bottles and effectively separates them from each other so that they can be rapidly dropped into place, thereby minimizing the effort of the dairy worker in filling the cases. The divider D initially guides the bottles so that they can be dropped through the divider and will readily find their seat on the elements 20 of the bottom member B. The inherent resiliency of the sheet metal gives some degree of cushioning effect so that the glass bottles may be dropped into position without danger of breaking or chipping them. At the same time the bottom member is relatively stiff due to the way it is cut and formed as distinguished from a flat bottom member.

Some changes may be made in the construction and arrangement of the parts of my device without departing from the real spirit and purpose of my invention, and it is my intention to cover by my claims any modified forms of structure or use of mechanical equivalents which may be reasonably included within their scope.

I claim as my invention:

1. A bottom member comprising a sheet of metal having down-turned flanges at its periphery, individual seats formed in said bottom member for bottles or the like, each of said seats comprising a pair of semi-circular seat elements spaced from each other by a rectangular gap between them, the seat elements and gaps in successive seats being at right angles to each other said seats having flanges bent upwardly at the ends of the rectangular gaps to form separating flanges between successive bottles.

2. A bottom member for a bottle carrier or the like comprising in combination a sheet metal member having an array of concave seating depressions to receive bottles, the depressions having elongated rectangular gaps extending the entire width thereof, portions of said metal member bent upwardly at the ends of the elongated rectangular gaps defining bottle-retaining flanges, the adjacent pairs of depressions having their gaps oriented transversely in relation to each other to define a complete cage about each depression.

3. A bottom member for a bottle carrier comprising in combination a sheet metal member having an array of concave seating depressions to receive bottles, and a depending peripheral flange extending beyond the depth of the depressions, the depressions having elongated rectangular gaps extending the entire width thereof, portions of said metal member bent upwardly at the ends of the elongated rectangular gaps defining bottle-retaining flanges, the adjacent pairs of depressions having their gaps oriented transversely in relation to each other to define a complete cage about each depression.

4. In a bottle carrier the improvement comprising a sheet metal member having an array of concave seating depressions to receive bottles, and a depending peripheral flange extending beyond the depth of the depressions, a reinforcing member secured to the peripheral flange and extending inwardly under the bottom of the same, the reinforcing member forming a bead at the point it turns inwardly, the depressions having elongated rectangular gaps extending the entire width thereof, portions of said metal member bent upwardly at the ends of the elongated rectangular gaps defining bottle-retaining flanges, the adjacent pairs of depressions having their gaps oriented transversely in relation to each other to define a complete cage about each depression.

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