Jan. 1, 1952 H. R. E. HEIDE 2,581,019

CONTAINER AND BOTTLE SUPPORTING RACK

Filed Nov. 9, 1946

Fig. 1

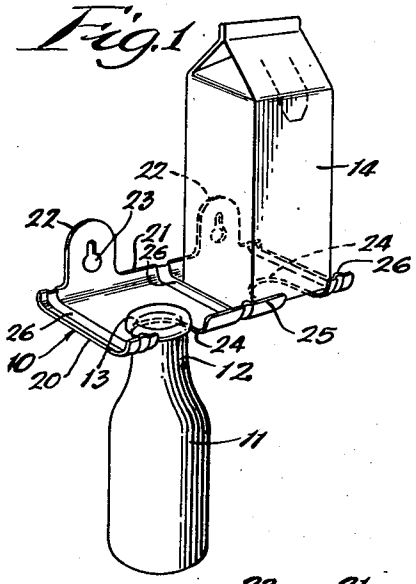


Fig. 2

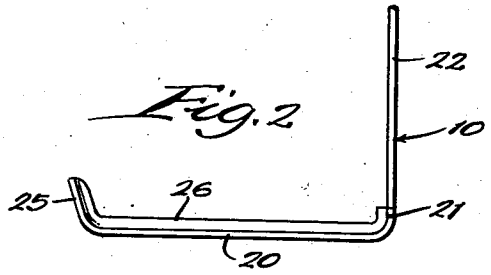


Fig. 3

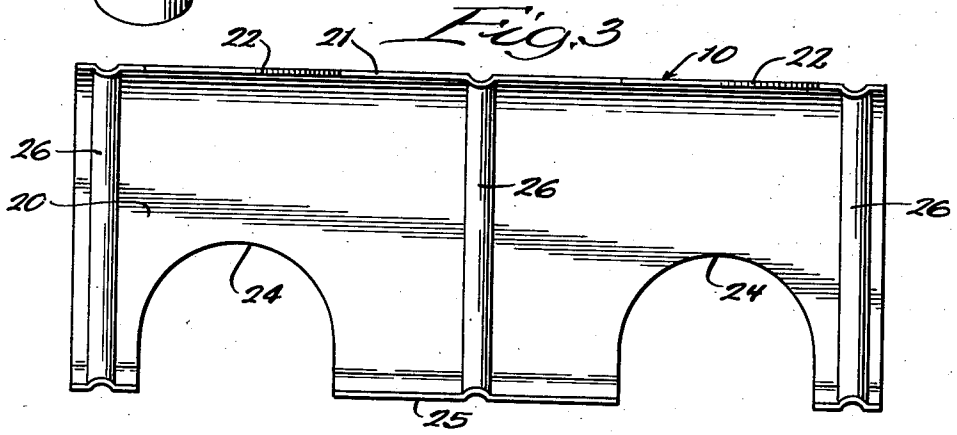


Fig. 4

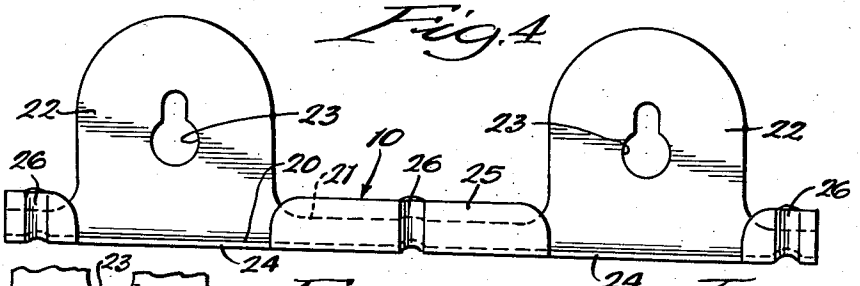
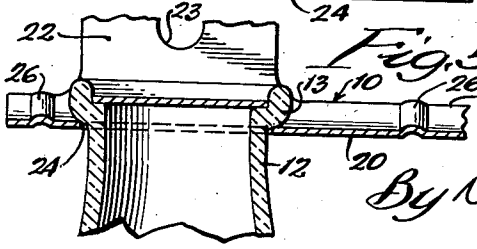


Fig. 5



Inventor:
Harold R. E. Heide,
By Dawson, Booth & Spangenberg,
Attorneys.

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CONTAINER AND BOTTLE SUPPORTING RACK

Harold R. E. Heide, Chicago, Ill., assignor to Henry Hildebrandt, Chicago, Ill.

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1 Claim. (Cl. 211—75)

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This invention relates to racks for supporting bottles and containers.

The delivery of milk and the like in containers and/or bottles to the home, particularly in early morning, poses a difficult problem for such containers and bottles are subject to molestation, spilling and contamination by the neighborhood cats and dogs unless they are safeguarded therefrom. Considerable money is annually spent in treating and sterilizing said containers and bottles and their contents only to have the benefits thereof so quickly and surely nullified. Many attempts have been made to correct this situation, such as by providing special closures and caps for the bottles and containers, special cabinets to receive them and so forth, but all of these have either proven to be inefficient or else so costly as to prevent widespread use thereof.

The principal object of the invention is to provide an improved rack for supporting upon delivery containers and bottles to effectively prevent molestation, spilling and contamination thereof by the neighborhood cats and dogs and which may be manufactured at low cost so that its use may become widespread. In this connection, the improved rack is preferably made from a single piece of metal suitably formed by punch and die operations into a horizontal shelf and vertical or upstanding ear brackets provided with holes for securing the rack to a vertical surface out of reach of the neighborhood pets. The horizontal shelf is provided with apertures for receiving the necks of the bottles for supporting the same. The shelf may be provided with upwardly extending ribs for reinforcing the shelf and defining areas for reception of the containers. The forward edge of the shelf may be provided with an upstanding flange to prevent the bottles from sliding out of the apertures and to prevent the containers from sliding off of the shelf. In the mass production of such racks they may be punched from sheet metal plates and the securing brackets or ears of one rack may be punched from the bottle supporting apertures of the next rack thereby conserving metal and aiding in low cost of manufacture.

Other objects and advantages will become apparent to those skilled in the art upon reference to the accompanying specification, claim, and drawing in which:

Figure 1 is a perspective view of the improved rack of this invention supporting a bottle and a container;

Figure 2 is an end elevational view of the rack;

Figure 3 is a top plan view thereof;

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Figure 4 is a front elevational view thereof; and

Figure 5 is a partial sectional view showing the manner in which the bottle is supported by the rack.

In Figure 1, the rack is generally designated at 10 and is mounted on a vertical surface out of reach of the neighborhood cats and dogs. It is adapted to support a conventional bottle 11 having a neck 12 and a flanged top 13 as well as supporting a conventional container 14.

The rack 10 may be formed from a single piece of sheet metal and includes a horizontal shelf 20. The rear of the shelf 20 is bent up into an upwardly extending flange 21 and the flange is provided with extensions in the form of vertical brackets or upstanding ears 22 having suitable openings 23 therein for mounting the rack on a vertical surface.

The forward edge of the shelf 20 is provided with apertures 24 for receiving the necks 12 of the bottles 11. The bottles 11 received in the apertures 24 are supported by the flanged tops engaging the shelf 20 adjacent the apertures 24, as is illustrated in Figure 5. The forward edge of the shelf 20 is also provided with an upwardly extending flange 25 which flange operates in conjunction with the flanged tops 13 of the bottles to prevent them from sliding forwardly out of the apertures 24. In this way, the bottles 11 are positively secured in the apertures 24 and supported thereby. The flanges 25 and 21 of the rack 10 operate to reinforce the rack. The shelf 20 is also provided with upwardly extending ribs 26 which form a dual function, that of reinforcing the shelf 20 and that of defining areas on the shelf 20 for receiving the containers 14. The ribs 26 and the flange 25 also operate to prevent the containers from sliding off the shelf 20.

In forming the rack 10, it is preferably blanked from a sheet of metal by a punching die, and preferably the apertures 24 have substantially the same dimensions as the brackets or ears 22 so that the brackets or ears 22 of one rack may be punched from the apertures 24 of the adjacent rack. The ribs 26 are then formed in the blank and the flanges 21 and 25 and the brackets or ears 22 are bent upwardly to complete the formation of the rack.

When the rack is mounted on a vertical surface by means of the holes 23 in the brackets or ears 22, containers 14 may be placed upon the shelf portion of the rack or bottles 11 may be suspended in the apertures 24 and in either event, the containers 14 and the bottles 11 are securely supported by the rack by reason of the

cooperation of the upwardly extending ribs 26 and flanges 21 and 25. The rack 10 while effectively supporting the bottles and containers may, at the same time, be manufactured at low cost.

While for purposes of illustration one form of this invention has been disclosed, other forms thereof may become apparent to those skilled in the art upon reference to this disclosure and, therefore, this invention is to be limited only by the scope of the appended claim and prior art.

What is claimed is:

A sheet metal rack for supporting containers and bottles having necks and flanged tops comprising a horizontal shelf, vertical upstanding ears integral with the rear of the shelf and provided with holes for securing the rack to a vertical surface, apertures in the forward edge of the shelf to receive the necks of the bottles with the flanged tops of the bottles engaging the shelf adjacent the apertures for supporting the bottles, said apertures being aligned with and of the same dimensions as said ears, whereby a plurality of such racks may be formed from blanks punched out of a single sheet of material without waste, upwardly extending ribs formed on the shelf between and on each side of the apertures for reinforcing the shelf and defining areas for the reception of the containers, and an upwardly extending flange on the forward edge of the shelf to be engaged by the flanged tops of the bottles to prevent them from sliding forwardly out of the apertures and to be engaged by the containers to prevent them from sliding forwardly off of the shelf.

HAROLD R. E. HEIDE.

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