June 14, 1932. J. C. FARRINGTON 1,863,301

CONTAINER FOR MILK BOTTLES AND THE LIKE

Filed Aug. 11, 1930

FIG. 1

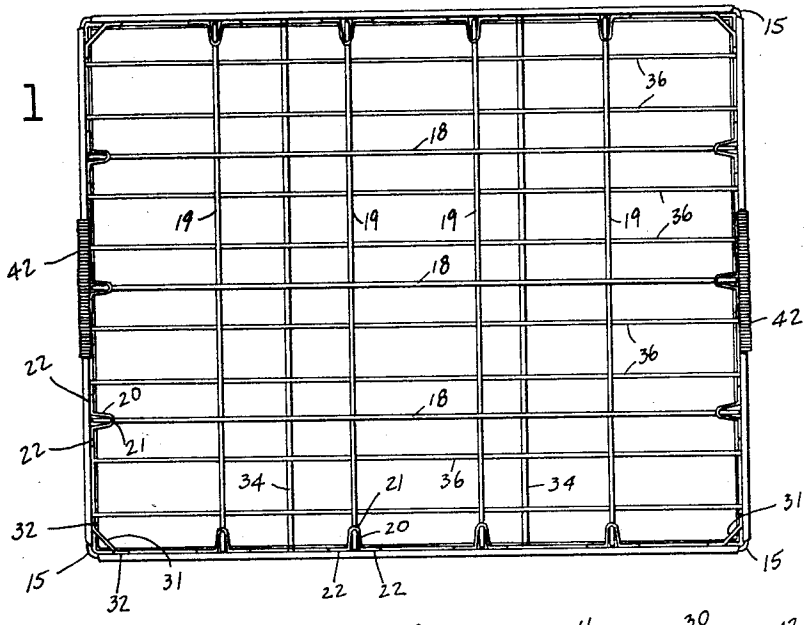


FIG. 2

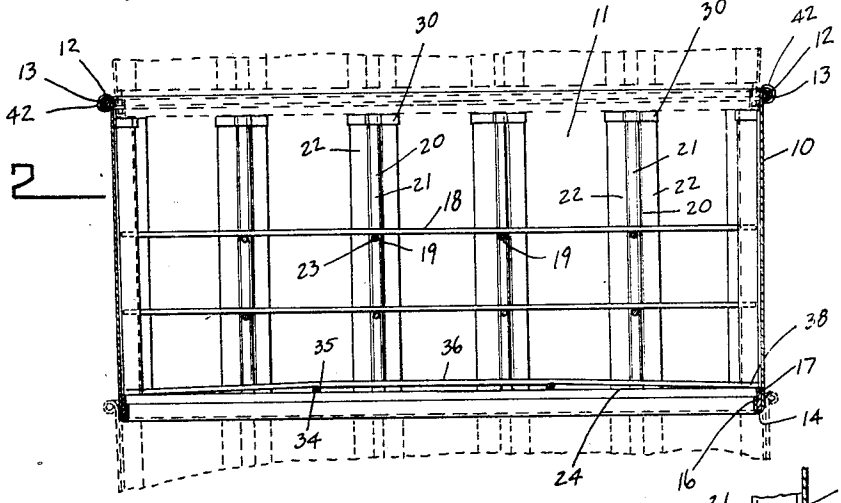


FIG. 3

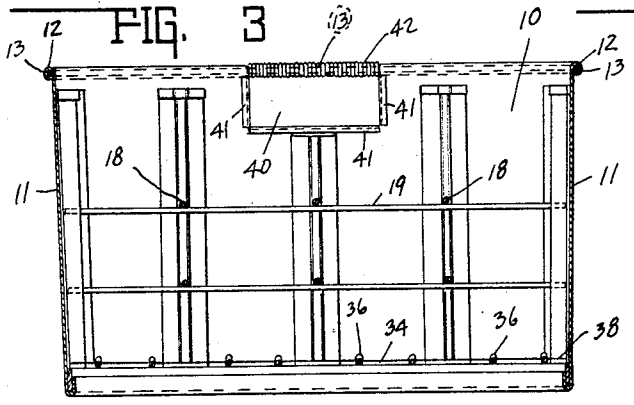
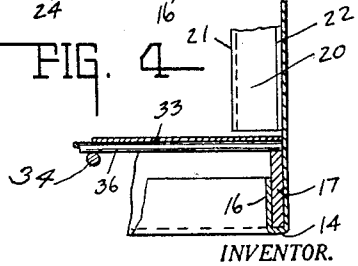


FIG. 4



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UNITED STATES PATENT OFFICE

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CONTAINER FOR MILK BOTTLES AND THE LIKE

Application filed August 11, 1930. Serial No. 474,353.

This invention relates to a relatively rigid box suitable for containing milk bottles and the like.

The chief object of this invention is to provide a metallic box which will readily stack with others and which will be entirely of metal, relatively rigid and very economical to produce.

The chief feature of the invention consists in the accomplishment of the foregoing object by the simplification of the several parts, and the construction of the same.

The full nature of the invention will be understood from the accompanying drawing and the following description and claims:

In the drawing Fig. 1 is a top plan view of a box suitable for milk bottle reception.

Fig. 2 is a longitudinal central sectional view through the same, showing it superposed upon the top or identical box and having an identical box superposed upon it, the latter boxes being shown dotted.

Fig. 3 is a transverse sectional view through the same.

Fig. 4 is an enlarged transverse sectional view through the bottom portion of a modified form of the invention illustrating the closed bottom type.

In the drawing 10 indicates the ends and 11 the sides of a metal box, the upper edges of which are curled outwardly to form an outwardly directed bead or top edge 12, within which is mounted a reinforcing rod or wire 13, the same being exposed at the corners as at 15. The lower edges of the sides and ends are turned inwardly as at 14 and upwardly as at 16, forming a groove that receives a rectangular bar or bottom forming reinforcing member 17. The sides and ends are sloped inwardly toward the bottom so that the one box will readily nest in another. Such nesting arrangement is indicated in Fig. 2. For receiving milk bottles, boxes of this general character are arranged to accommodate twenty pints or twelve quarts, the arrangement being 5 x 4 and 4 x 3 respectively. A quart-containing box will be received by or receive a pint-containing box. The capacity therefore, is determined by the number of partitions and spacing thereof.

Herein the partitions are illustrated as of open work character and each partition comprises a pair of spaced rods, the longitudinal rods being indicated by the numeral 18 and the transverse rods by the numerals 19. The rods may or may not be secured together at the intersection but preferably the same are spot-welded at the intersections, the two upper and lower series of transverse rods forming a grillage. The rods are anchored at each end to the end and side walls.

The anchorage for the rods includes an inwardly extending U-shaped member having the sides 20, the mid-portion 21 and the two outwardly directed wings 22. The mid-portion is apertured as at 23 to freely receive the end of the rod that extends into it through it and which is enclosed by the two side wall portions 20 of the U-shaped retainer. The wings 22 are suitably secured to the end or side walls by spot welding and the like.

All of the U-shaped wire or partition supporting members are mounted upon the two grillages and all are inserted into the box until the bottom edge 24 engages the top of the bar 17. Partition supports are then secured to the end and side walls as before mentioned. With this type of construction, therefore, all that is required in the way of ties, is a suitable frame to receive the transversely arranged rods in predetermined spaced relation and so arranged that the intersections are exposed for spot welding, soldering or the like. Mounting of the partition supports by endwise mounting upon the ends of the rods and subsequent insertion in the box and spot-welding or metallic tacking secures the anchorages to the side and end walls and the partitions are anchored. Even though the wires become bent the aperture engagement is sufficiently distant from the wire end to still trap or retard the wire therein.

To prevent tearing or scratching, the upper and exposed end of each anchorage is doubled back as at 30 to form a reinforced seat that is engaged by flange 14 of the inturned bottom portion of the side and end walls of a superposed box. When the grillage and anchorages are not employed the box may be fashioned for superposed nesting

by the addition of the corner members 31, having a bias relation with respect to the side and end walls and having the wings 32 suitably secured thereto in a manner similar to the wings 22. The top edges of the bias portion 32 serve as supports for the superposed box.

The bottom of the box may be open work or closed. If it is closed, a sheet metal bottom is employed and in the present instance, this sheet metal bottom is superposed upon the open work bottom so that a relatively light gauge metal may be employed for the closed bottom and the same is reinforced or supported by the open work one. This sheet of metal is only illustrated in Fig. 4, and is indicated by the numeral 33.

The open work bottom is shown clearly in Figs. 2 and 3. It consists of a suitable number of transverse rods 34, suitably secured as at 35 to the longitudinal rods 36. The ends 38 of said rods rest upon the top of the bar 17 and preferably are secured thereto by spot welding or the like. In the present invention, Fig. 4, the longitudinal rods 36 are positioned below the plate 33 and below which in turn is positioned the transverse rods 34.

Each end wall includes an aperture 40, the edges of which are reinforced and are also protected by having flange portions turned back as at 41. The rod 13 which bridges the gap formed by the cut-out 40 is enveloped by a coil of wire 42 which forms a handle or grip for the box.

It is to be understood in the construction of the box that the bottom is first secured to the side and end walls near the bottom thereof. This bottom may be either of the closed type or of the open grill type, as described. The partitions, grillages and anchorages, therefore, are then applied to the box so that the bottom edges of the anchorages will form a pocket, with the top edge of the bar. This pocket receives the edge of the bottom plate and secures the same therebetween.

The invention claimed is:—

1. A light gauge sheet metal box suitable for the purpose described, including side and end walls arranged in box outline, a bottom bar having a similar outline, a top rod having an outline of slightly greater length than but similar to the bar outline, the side and end walls being turned angularly at the top and bottom for bar and rod anchorage, and stop portions secured to the inner side of the end and side walls and extending upwardly from adjacent the bottom toward and terminating short of the top thereof for supporting the bar of a superposed box when in stacked relation and reinforcing said side and end walls.

2. A sheet metal box suitable for the purpose described, including side and end walls arranged in box outline, the bottom bar having a similar outline, a top rod having an outline of slightly greater length than but similar to the bar outline, the side and end walls being turned angularly at the top and bottom for bar and rod anchorage, stop portions secured to the inner side of the end and side walls and terminating short of the top thereof for supporting the bar of a superposed box when in stacked relation, said stop portions terminating short of the bar and forming a groove therewith, and a sheet metal bottom nested in said grooves and retained thereby.

3. A sheet metal box suitable for the purpose described, including side and end walls arranged in box outline, the bottom bar having a similar outline, a top rod having an outline of slightly greater length than but similar to the bar outline, the side and end walls being turned angularly at the top and bottom for bar and rod anchorage, stop portions secured to the inner side of the end and side walls and terminating short of the top thereof for supporting the bar of a superposed box when in stacked relation, said portions extending downwardly toward the bar and portions upon opposite ends and side walls being spaced oppositely and in predetermined spaced relation for partition anchorage, and partition means extending from one inner side to the opposite inner side and supported by said stop portion.

4. A sheet metal box suitable for the purpose described, including side and end walls arranged in box outline, the bottom bar having a similar outline, a top rod having an outline of slightly greater length than but similar to the bar outline, the side and end walls being turned angularly at the top and bottom for bar and rod anchorage, stop portions secured to the inner side of the end and side walls and terminating short of the top thereof for supporting the bar of a superposed box when in stacked relation, said portions extending downwardly toward the bar and portions upon opposite ends and side walls being spaced oppositely and in predetermined spaced relation for partition anchorage, partition means extending from one inner side to the opposite inner side and supported by said stop portion, said stop portions terminating short of the bar and forming a groove therewith, and a sheet metal bottom nested in said grooves and retained thereby.

5. A sheet metal box suitable for the purpose described, including side and end walls arranged in box outline, bottom forming means positioned within said walls and connected thereto near the bottom thereof, a plurality of partitions extending from one inner wall to the opposite inner wall, each partition including a plurality of spaced individual members each terminating in free ends, said partitions being arranged transversely of each other for partition intersection, and an anchorage member for each partition end and including a base portion substantially parallel to the inner side and se-

cured thereto and including an outwardly directed portion having a plurality of spaced transversely directed apertures therein corresponding to the number of spaced members constituting the partition and correspondingly spaced, said apertures receiving the free ends of the members forming the partition for anchoring the partition to the wall.

6. A device as defined by claim 5, characterized by the outwardly directed portion of the anchorage member for each partition being arranged in U-shaped formation with the apertures at the midportion of the U, and the base portion of the anchorage member comprising diverging wings.

7. A sheet metal box suitable for the purpose described, including side and end walls arranged in box outline, bottom forming means positioned within said walls and connected thereto near the bottom thereof, partition means extending from one inner side to the opposite inner side and including a plurality of spaced members, and an anchorage for each partition including a base portion substantially parallel to the inner side and secured thereto and including an outwardly directed portion for spaced member anchorage, the anchorage being extended upwardly and terminating near the top of the box and having a portion turned back upon itself for forming a seat, the top of the box being flared outwardly from the bottom for stacking, the superposed stacked box being receivable within the box walls and seatable upon the anchorage.

In witness whereof, I have hereunto affixed my signature.

JAMES C. FARRINGTON.