Dec. 11, 1962 H. C. HILL 3,067,922

SERVICE PLATE OR TRAY

Filed Aug. 12, 1960

Fig. 1

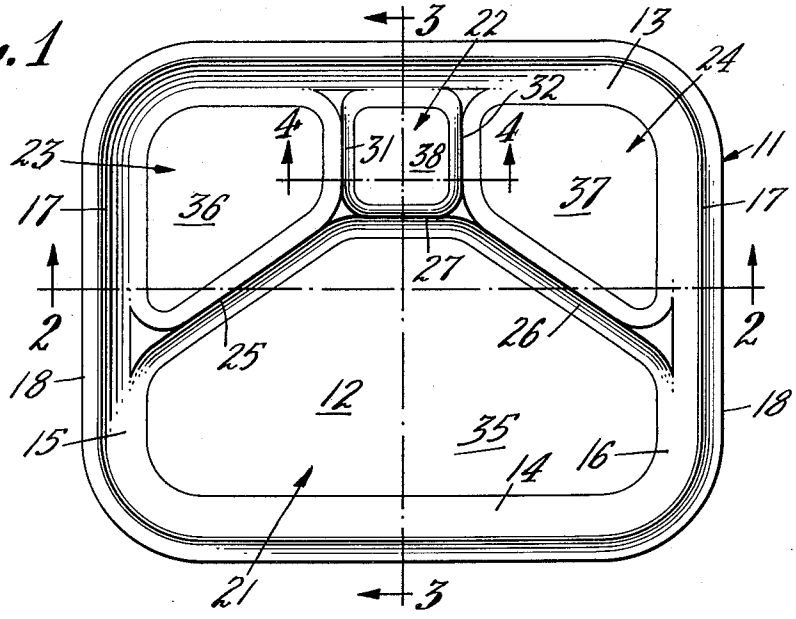


Fig. 2

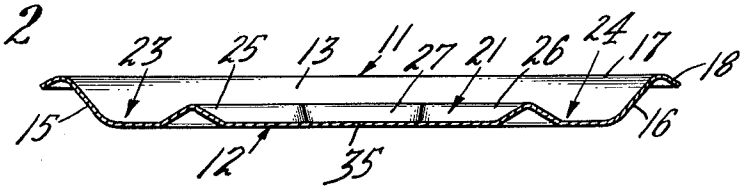


Fig. 3

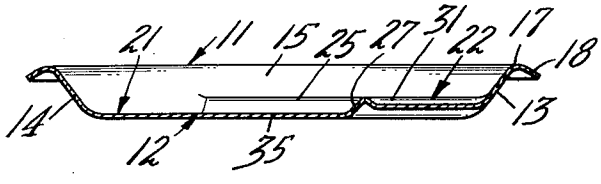
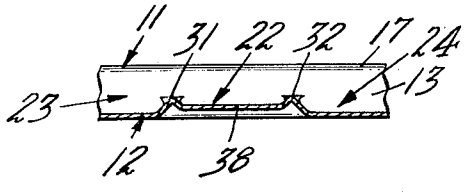


Fig. 4



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SERVICE PLATE OR TRAY

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This invention relates to plates or trays and more particularly to a compartment tray for holding a quantity of different foods, each being separated from the other by ribs or barriers joined together and to surrounding side walls to serve as reinforcing elements for the tray.

The present invention is directed to a compartment or service tray which is formed from a single layer of fibre or paperboard material, light gauge metal or of plastic material which may be molded or pressed into shape to produce a relatively flat tray or plate having a plurality of sections or compartments for holding several different foods such as meats, fish, vegetables, salads and the like, either hot or cold, wherein an arrangement of ribs or separating wall elements embossed in the bottom wall merge into adjacent rib elements, one of the side walls and into the end walls to increase the rigidity of the tray and its resistance to bending.

An object of the invention is the provision of a compartment tray for holding a plurality of foods, each separated from the other by reinforcing rib elements which strengthen and rigidifies the tray in different directions.

Another object is the provision of a compartment tray which is divided into a desired number of equal and of unequal sections of substantially the same and of a different depth which may be necessary for various food products and of a plurality of reinforcing ribs embossed in the bottom wall of the tray and extending in desired directions to define the compartments and to extend into the surrounding tray walls in such a manner to stiffen and strengthen the tray in several directions so that when the tray compartments are filled with food the tray may be grasped at its rim and lifted without danger of the tray buckling and spilling the food.

A further object is the provision of such a tray having a plurality of compartments which are separated by an arrangement of inverted V-shaped ribs embossed in the bottom wall of the tray which permit stacking of such trays in nested relation and thereby simplify packaging and minimize the space for storage and shipment.

Numerous other objects and advantages of the invention will be apparent as it is better understood from the following description, which, taken in connection with the accompanying drawing, discloses a preferred embodiment thereof.

Referring to the drawing:

FIGURE 1 is a top plan of a compartment tray embodying the present invention;

FIGURE 2 is a sectional elevational view taken longitudinally along the line 2—2 in FIG. 1;

FIGURE 3 is a transverse sectional view taken along the line 3—3 in FIG. 1; and

FIGURE 4 is a fragmentary sectional view taken along the line 4—4 in FIG. 1.

As a preferred or exemplary embodiment of the instant invention, the drawing discloses a substantially flat plate or tray which is pressed or molded from a single piece of relatively thin plastic material, light gauge metal or film, fibre or paperboard which, when the latter is used preferably is treated or coated in any suitable manner either before or after the tray is completed to render it resistant to moisture, grease or the like.

FIGURE 1 of the drawing illustrates a rectangular plate or tray 11 having a bottom wall 12, side walls 13, 14 and end walls 15, 16 joined together respectively at the four rounded corners of the tray as a continuous surrounding wall, extending obliquely upwardly and merging into a curved upper marginal ridge portion 17 at the upper end of the tray (FIGURES 2 and 3), and terminating in an outwardly and downwardly sloping edge 18.

The tray preferably is divided into a plurality of compartments or separate sections 21, 22, 23 and 24 of substantially different size and outline by a plurality of rib elements arranged in a predetermined pattern and extending upwardly from the bottom wall 12. These rib elements preferably are in the form of an inverted V-shape section which are embossed in the bottom wall and may, if desired, extend the full height of the tray but, for the purpose of this invention it is desired that they extend upwardly for a distance substantially halfway of the height of the surrounding side walls. With the rib elements formed in this manner and merging into the sloping side and end walls the trays may be nested readily one within the other.

The compartment 21 constitutes the largest section of the tray and adjoins one of the side walls 14 extending substantially the full length of the tray. This compartment is separated from the others by rib elements 25, 26 which merge with and converge inwardly from the opposite end walls 15, 16 respectively. At their inner ends the rib elements 25, 26 merge into the opposite ends of an intermediate rib element 27 which extends longitudinally of the tray in space relation to the side walls, 13, 14.

The compartment 22 which is substantially rectangular in outline constitutes the smallest section of the tray and adjoins the other side wall 13 midway between the ends of the tray. This compartment 22 is separated from the compartment 21 above described by the intermediate rib element 27 and from each of the remaining or corner compartments 23, 24 by a pair of rib elements 31, 32. The latter rib elements merge from the side wall 13 and extend transversely inwardly in parallel spaced relation toward and into a pair of spaced apart points of merger with the inner ends of the rib elements 25, 26 and the opposite ends of the intermediate rib element 27.

The remaining or corner compartments 23, 24 are substantially equal in size and are the direct opposite of each other with respect to their contour. Compartments 23, 24 thus are separated from the others described above by rib elements 25, 31 and 26, 32 respectively.

The bottom walls of the compartments 21, 23 and 24 are substantially in the same plane (FIG. 2) as the original bottom wall 12 of the blank or sheet from which the tray was produced and these are designated by the numerals 35, 36, 37 respectively. The rectangular compartment 22, however, is relatively shallow and a bottom wall 38 for this compartment is disposed in a different or higher plane relative to the others (FIGS. 3 and 4).

With the rib elements embossed in the arrangement as illustrated in the drawing, merging into a side and the end walls and together at an intermediate area of the bottom wall, a substantial increase in strength and rigidity is effected whereby the tray is resistant to bending in different directions when food is placed within the different compartments and the filled tray is lifted along its peripheral edge portion or from one of the corners.

It is thought that the invention and many of its attendant advantages will be understood from the foregoing description and it will be apparent that various changes may be made in the form, construction, and arrangement of the parts without departing from the spirit and scope of the invention or sacrificing all of its material advantages, the form hereinbefore described being merely a preferred embodiment thereof.

I claim:

1. A service tray comprising a substantially flat bottom wall, side and end walls extending obliquely upwardly therefrom and merging into a curved upper marginal ridge portion surrounding the tray and terminating in an outwardly and downwardly sloping edge, and a plurality or rib elements in said bottom wall extending upwardly therefrom, one of said rib elements converging inwardly from each of said end walls toward one side wall and merging at spaced apart points of merger into opposite ends of an intermediately disposed rib element extending substantially parallel to said one side wall, and another of said rib elements extending from each of said points of merger outwardly therefrom and transversely of said bottom wall in parallel spaced apart relation toward and into said one side wall of the tray, said rib elements dividing said bottom wall into a plurality of compartments and imparting a stiffening and strengthening effect which is resistant to bending of the tray in different directions.

2. A service tray as claimed in claim 1 in which said intermediately disposed rib element is positioned closer to said one side wall than to the opposite side wall.

3. A service tray as claimed in claim 2 in which said intermediately disposed rib element with said parallel spaced apart rib elements define with said one side wall a substantially square compartment.

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