March 20, 1956 T. ST. CLAIR 2,738,915

MOLDED SERVICE TRAY

Filed Jan. 10, 1952

Fig. 1

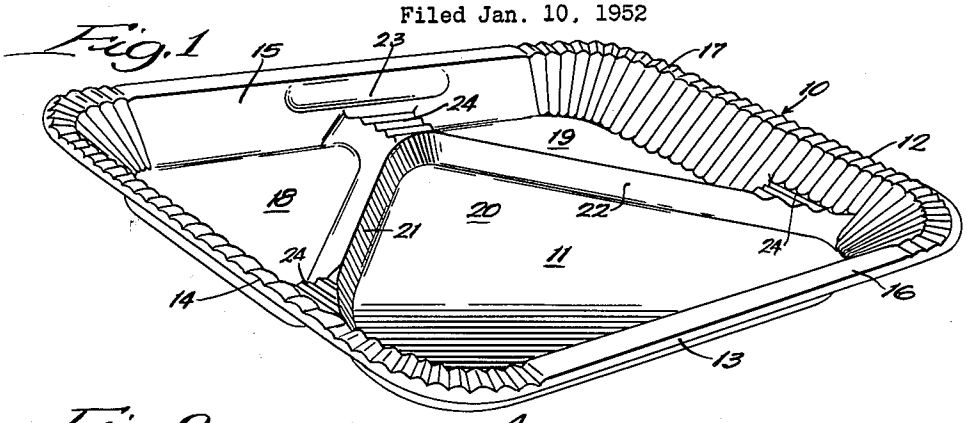


Fig. 2

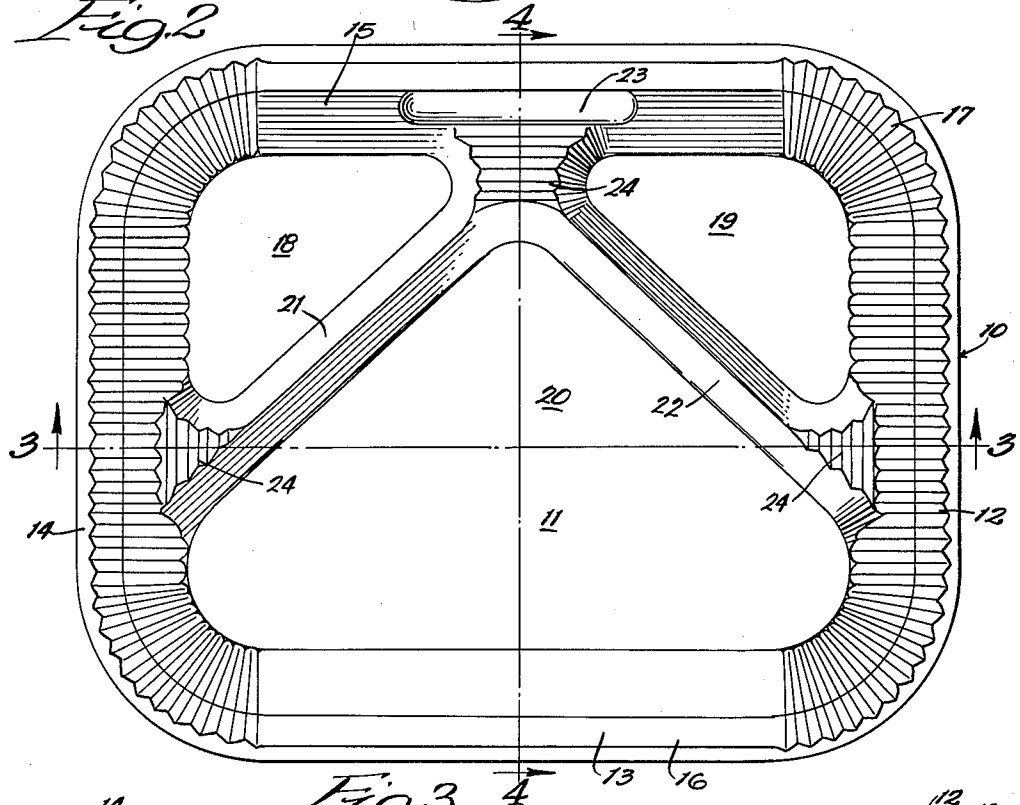


Fig. 3

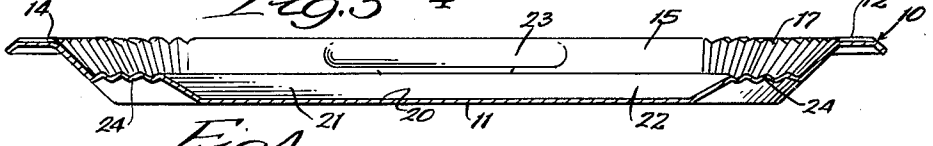
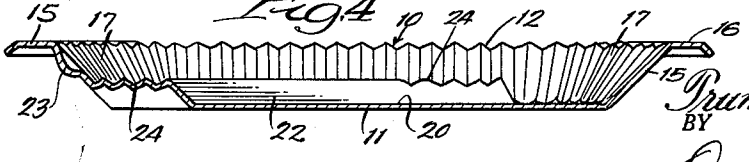


Fig. 4



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MOLDED SERVICE TRAY

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3 Claims. (Cl. 229—2.5)

This invention relates to a new and improved tray for use in the service of food or the like, and relates more particularly to a service tray of the type described divided into sections for the separation of food carried thereon. The invention has application particularly to tray members of the type described formed of relatively weak and non-rigid materials, such as a molded plastic sheet stock, fibrous sheets, or fiber sheets treated with a resinous material to improve the wet strength and water repellency thereof.

In the construction of a sectional tray of the type described, wherein division is achieved by ribs formed thereon to converge from opposite walls to a substantially common point in an adjacent wall intermediate the sides, a line of pivot is established at the point where the rib sections merge or were about to merge into the wall portion to the extent that the tray may be easily bent along the ribbed sections. A tray of the type described possesses insufficient rigidity and strength properly to hold substances deposited thereon, especially when it is held at a corner portion set off from the remainder of the tray by the ribbed section. Insufficient rigidity results even in the presence of a single rib section diagonally arranged between intermediate side walls or connecting opposite side walls.

It is an object of this invention to produce a sectional service tray of the type described which is free of the objectionable features which have characterized structures heretofore produced.

Another object is to produce a sectional service tray of the type described which obviates the existence of pivotal points along sectioning ribs formed therein.

A further object is to produce a sectional tray of the type described formed with separate sections in a manner to eliminate pivotal points which have heretofore rendered such trays so easily bendable as to be incapable of functioning in the manner for which it was intended.

These and other objects and advantages of this invention will hereinafter appear, and for purposes of illustration, but not of limitation, an embodiment of the invention is shown in the accompanying drawing, in which Figure 1 is a perspective view of a tray member embodying features of this invention; Figure 2 is a top plan view of the tray shown in Figure 1; Figure 3 is a sectional view taken along the line 3—3 of Figure 2; and Figure 4 is a sectional elevational view taken along the line 4—4 of Figure 2.

By way of illustration, reference will be made to a preferred tray structure embodying features of this invention, but it will be understood that the inventive concepts may also be embodied in other sectional trays where flexure or bending can readily take place because of the establishment of one or more pivotal points along ribbed sectional members.

As previously pointed out, bending characteristics of the type which this invention is intended to overcome do not exist in tray members formed of metal or other material having a wall thickness and strength to obviate

bending. The features of this invention are particularly beneficial in tray structures molded of thin plastic sheet stock, thin metal film, or fibrous sheet stock which may or may not be impregnated or coated with resinous or other plastic material to impart wet strength and to militate against absorption or penetration of fluids from the food contained therein into the pores of the fibrous structure.

As shown in the drawing, **10** represents a tray having a bottom wall **11**, side walls **12**, **13**, **14**, and **15** extending upwardly from the edges thereof, and a flanged portion **16** extending outwardly from the upper ends of the side walls to provide a dished container. When molded of fibrous sheet stock, the edge portions in the vicinity of the corner sections are preferably formed with flutes **17** to take up the excess material and to provide greater rigidity as well as a more attractive appearance to the tray.

The tray is divided into separate sections **18**, **19**, and **20** by a pair of ribs **21** and **22** formed to extend upwardly from the bottom wall and converge from opposite side walls **12** and **14** to an intermediate portion of an adjacent wall **15**. The ribbed sections which merge into adjacent side walls in the manner described, form lines about which the separated sections may be bent with very little effort. As a result, if the tray is held by one of the separated corner sections or the other, the tray is highly likely to collapse when food is placed therein, with consequent spillage of the ingredients.

It has been found that the tendency for the tray to bend or collapse along lines formed by the ribs may be overcome by embossing the wall portion into which the ribs substantially merge to form an inwardly-extending or outwardly-extending groove **23** which crosses the pivotal point and extends a substantial distance in either direction beyond the line formed by the rib or ribs so as to provide an effective stiffening action along the line of pivot. Where the ribs converge, as in the illustrated embodiment, it is best to form the embossed groove portion as a continuing section which extends beyond the line extensions from each rib in both directions. The stiffening groove or grooves **23** are preferably located in the wall section immediately above the merging rib and in parallel relation with the bottom wall so as to cross the line of pivot at a point where it is most capable of inactivating the same.

Where the rib ends just in advance of the side walls or back walls, marked improvement results from the use of embossed sections of the type described in the side wall portion which crosses the line formed by the extension of the rib.

Ordinarily, it will be sufficient if a single embossed section is provided in one wall to cross the rib line, but, in the event that greater rigidity is required, embossed sections of the type described may be formed in the wall portions to cross the line formed by the extension of the ribbing into the respective wall portions.

Further resistance to the bending action may be achieved by forming the end portion of the rib into a number of flutes **24** which extend substantially parallel to the adjacent wall and cross the line of pivot.

It will be understood that changes may be made in the details of construction, arrangement and operation without departing from the spirit of the invention, especially as defined in the following claims.

I claim:

1. A dished tray molded of previously prepared fibrous sheet stock comprising a horizontally disposed, relatively flat bottom wall, side and end walls extending upwardly substantially vertically continuously from the outer edges of the bottom wall, ribbed members extending upwardly in the bottom wall for a distance less than the side and

end walls and converging from opposite side walls to an intermediate portion of an end wall to subdivide the tray into separated dished sections whereby lines of weakness and resistance to bending extend along the ribs and concentrate at the line of convergence in the end wall, a horizontally disposed groove embossed in the end wall above the level of the converging ribs but below the upper edge thereof in the path of the lines of convergence of the ribs and in which the groove is dimensioned to extend laterally a short distance beyond the lines of convergence.

2. A dished tray as claimed in claim 1 in which the embossure forming the groove extends outwardly, as distinguished from downwardly, in the end wall portion immediately above the converging ribs.

3. A dished tray as claimed in claim 1 in which the embossure forming the groove is dimensioned in cross-section to have its upper horizontally disposed edge portion spaced downwardly from the upper edge of the end wall and its lower horizontally disposed edge portion spaced a short distance above the level of the ribs formed upwardly in the bottom wall of the tray.

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