Sept. 22, 1953 T. W. FOSTER 2,652,921

FLATWARE PACKAGE

Filed May 21, 1951 2 Sheets-Sheet 1

Fig. 1

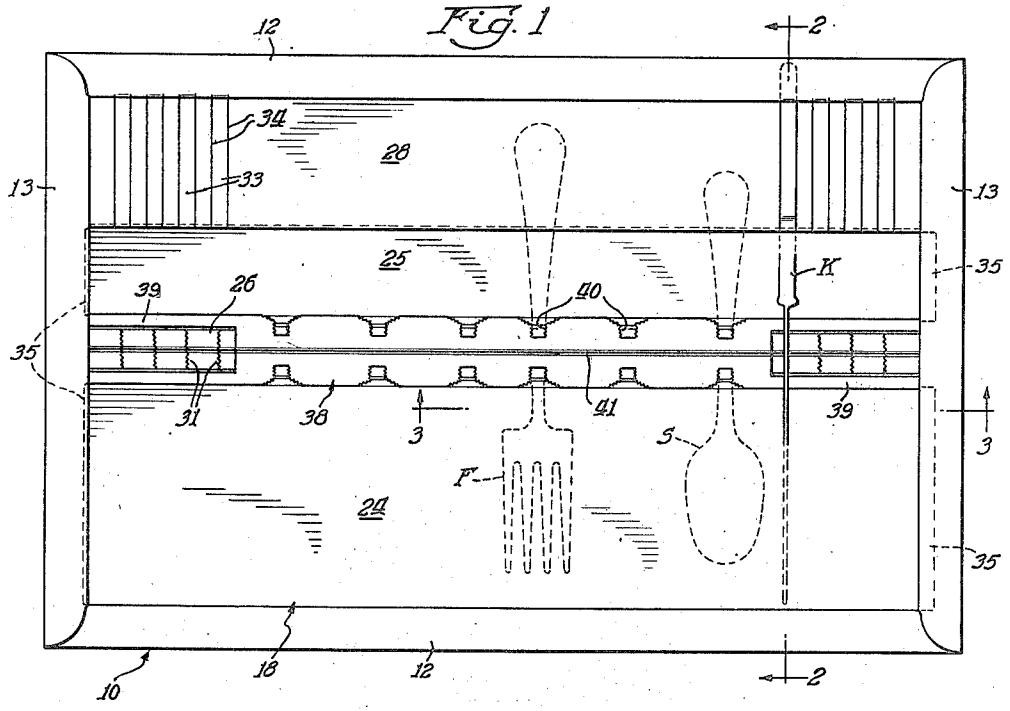


Fig. 2

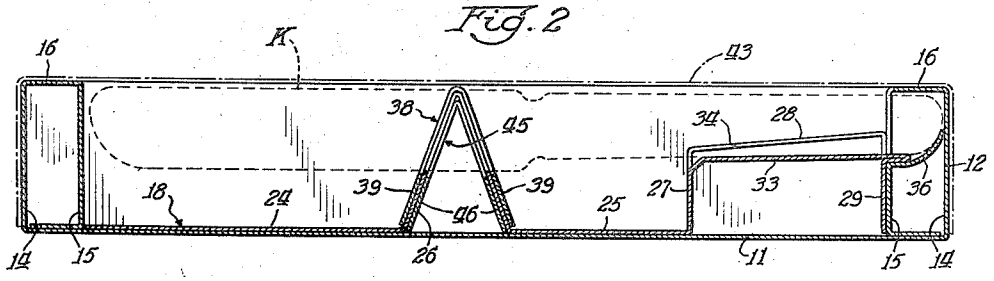


Fig. 3

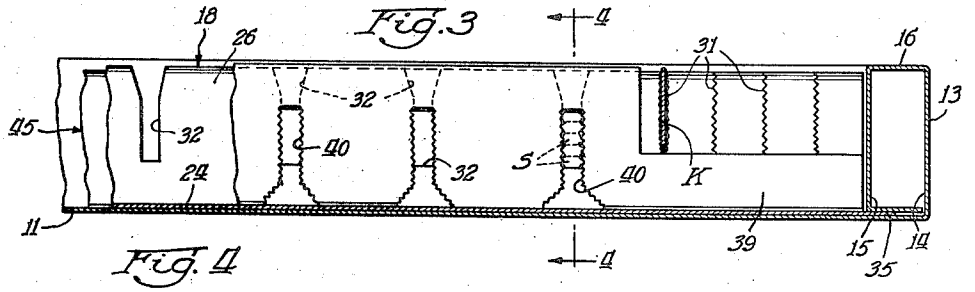
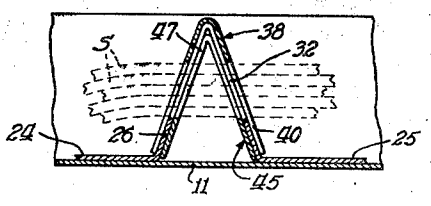


Fig. 4



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Fig. 5

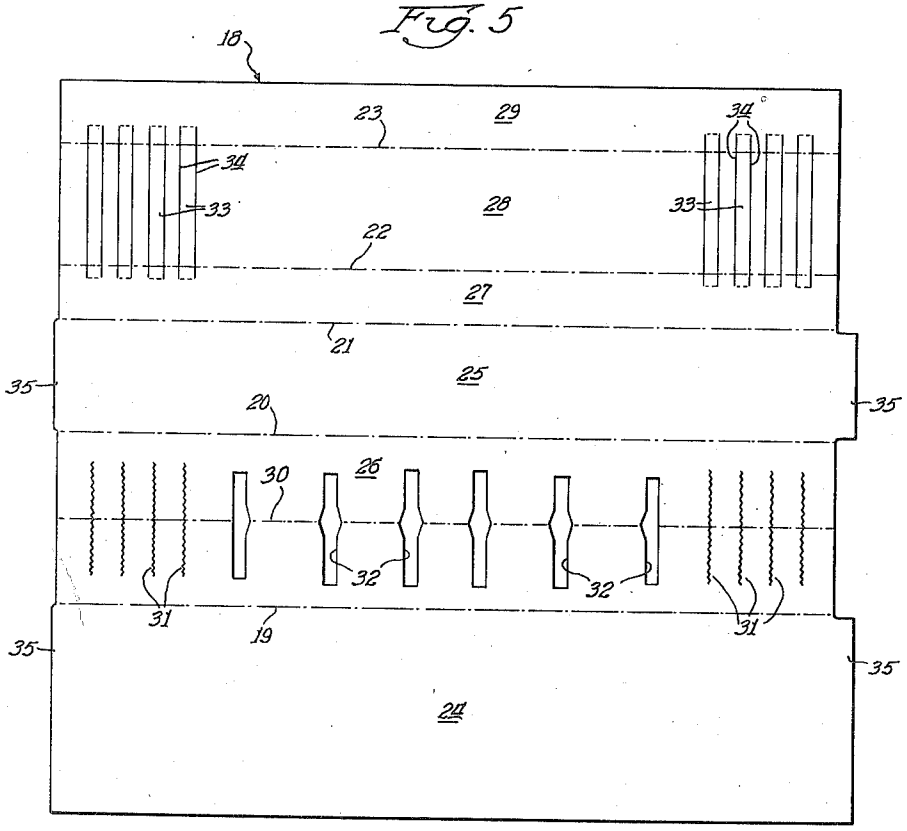


Fig. 6

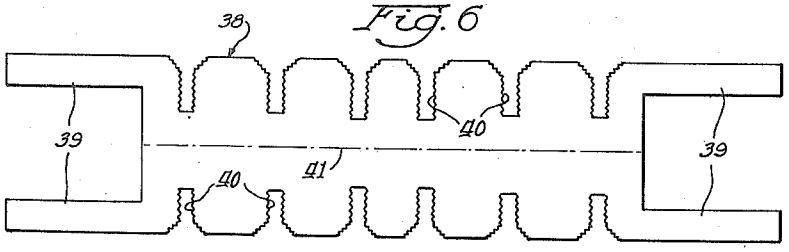
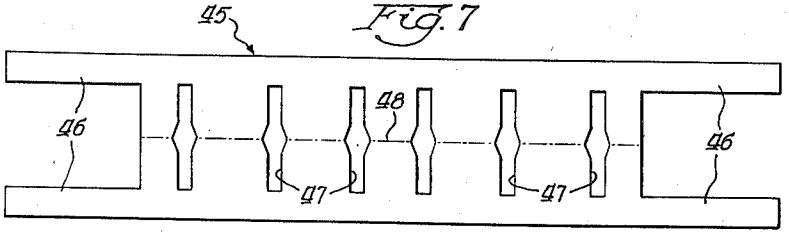


Fig. 7



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UNITED STATES PATENT OFFICE

2,652,921

FLATWARE PACKAGE

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4 Claims. (Cl. 206—45.19)

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The present invention relates in general to a paperboard locking tray construction for flatware and like articles, and more particularly to a locking insert of paperboard for securing flatware or the like in such a tray against disarrangement.

The illustrative embodiment of the invention disclosed herein comprises an article-supporting insert adapted to be disposed in a hollow-walled tray. This insert is in the form of a paperboard sheet overlying the tray bottom and having an intermediate support portion bent to extend upwardly along the center of the tray, and an edge portion bent to provide a ledge parallel to the support portion and extending along a wall of the tray. The bent support portion has at each end a plurality of spaced slits extending across its crest and downwardly toward the tray bottom, and a plurality of slots, generally similar to the slits but appreciably wider, spaced along its length between the groups of slits. Each of the slits is adapted to receive with a tight frictional grip the blade of a knife or similar article, while the slots are adapted to receive the shanks of handles of other atricles of flatware, such as forks and spoons. Such articles may be nested or stacked in the usual manner. To secure the articles in the slots, there is provided a locking insert in the form of a sheet or strip of paperboard corresponding substantially to the bent support portion in dimensions so that it may be similarly bent and disposed thereover in nested relation. At each end, a central part of the strip is cut away to provide retaining projections which extend under the knife blades held in the slits. Notches located to correspond to the slots of the bent support portion extend inwardly from the strip edges, each notch in one edge being in aligned and opposed relation to a notch in the opposite edge. These notches are of such length that their inner or closed ends are spaced above the ends of the slots in the support portion when the locking insert is disposed thereover, closing the upper or central portions of those slots, and thus locking the articles in place. A suitable cover may be provided to telescope over the tray, resting on the side walls, the crest of the locking insert, and the backs of the knives.

The invention provides a simple, easily assembled locking tray construction the several parts of which may be formed, shipped, and stored in flat space-saving condition and quickly set up for use. In assembling the parts, the tray walls are folded and secured in their hollow form and the supporting insert is folded to provide the bent support portion and ledge and disposed in the

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tray. The articles are then disposed in the slots of the support portion and the locking insert bent and pushed down thereover in the securing relation described. The knives are then put in place, the blades being pushed down into the slits in the support portion and over the retaining projections of the locking insert. The cover is set up and slipped over the tray, and the resulting package may then be placed either alone or with others in a suitable shipping container or the like.

It is an object of the invention to provide a simple and effective locking tray construction for flatware and the like. It is another object to provide a flatware tray or the like with effective yet simple and readily assembled locking means for articles packed therein. A further object is the provision of a simple, easily applied locking insert for a flatware tray or the like to prevent displacement of articles packed therein. Still another object is the provision of an article locking insert for a flatware tray or the like which may be applied by merely pushing the insert downwardly over the articles to be secured and a support for the articles. It is a further object of the invention to provide article locking means for a flatware tray or the like adapted to extend over the articles to be held in place and under otherwise secured articles to be retained in position thereby.

Other and further objects, advantages, and features of the invention will be apparent to those skilled in the art from the following description, taken with the accompanying drawings, in which:

Fig. 1 is a plan of a tray for flatware or the like showing the locking insert in position;

Fig. 2 is an enlarged vertical sectional view taken substantially along the line 2—2 of Fig. 1;

Fig. 3 is an enlarged fragmentary sectional view taken substantially along the line 3—3 of Fig. 1;

Fig. 4 is a fragmentary sectional view taken substantially as indicated by the line 4—4 of Fig. 3;

Fig. 5 is a plan of a blank for an article-supporting insert for the tray;

Fig. 6 is a plan of a blank for the locking insert; and

Fig. 7 is a plan of a blank for a reinforcing insert.

In the drawings there is shown a tray 10 having a bottom 11, side walls 12, and end walls 13. The walls are of hollow construction, with outer and inner vertical portions 14 and 15, respectively, connected by a horizontal top portion 16. An article-supporting insert 18, shown in its blank

form in Fig. 5, is disposed on the tray bottom 11 to hold flatware or other articles in desired arrangement in the tray. The insert 18 comprises a substantially rectangular sheet of paperboard or like material of a length corresponding to the distance between the inner portions 15 of the end walls 13, having parallel longitudinal fold lines 19, 20, 21, 22, and 23 to define a pair of spaced bottom panels 24 and 25 connected by a support panel 26, and ledge-forming panels 27, 28, and 29. The bottom panel 24 is defined between one edge of the sheet and the line 19, the support panel 26 between the lines 19 and 20, the bottom panel 25 between the lines 20 and 21, the panel 27 between lines 21 and 22, the panel 28 between lines 22 and 23, and the panel 29 between the line 23 and the opposite edge of the sheet. The support panel 26 has a central fold line 30 extending longitudinally thereof, a plurality of spaced slits 31 adjacent each end extending transversely across the line 30, and a plurality of spaced slots 32 located between the groups of slits and similarly extending transversely across the line 30. Strips 33 are provided by pairs of slits 34 extending transversely of the ledge panel 28 and into panels 27 and 29, each of the strips being aligned with one of the slits 31 and having a width corresponding to the thickness of a knife handle or the like to be disposed in the tray. The widths of the panels 27 and 29 are less than the height of the tray walls, although the panel 29 is preferably somewhat wider than the panel 27. Each of the panels 24 and 25 has end extensions or projections 35.

The article-supporting insert 18 is folded on the several fold lines to the shape or cross section best shown in Fig. 2, and disposed in the tray 10 with the bottom panels 24 and 25 lying on the tray bottom 11, somewhat spaced from each other, and with their projections 35 disposed under the inner portions 15 of the end walls 13, as shown in Figs. 1 and 3. The support panel 26 is folded on line 30 to inverted V shape with its two halves extending upwardly at an angle from the panels 24 and 25 to the ridge or crest defined by the fold line 30, the slits 31 and slots 32 of course extending downwardly from the crest in each half or side of the folded support portion thus provided by the panel 26. The height of the support portion is substantially the same as that of the walls 12 and 13. The ledge panel 28 extends along one of the side walls 12, supported above the tray bottom by the vertically disposed panels 27 and 29, and sloping inwardly and downwardly from the side wall. The strips 33 are displaceable downwardly out of the plane of the panel 28 of the ledge thus provided. The upper part of the inner portion 15 of the side wall adjacent the ledge is formed with a plurality of displaceable tongues 36 (see Fig. 2) each in alignment with one of the displaceable strips 33.

A plurality of nested or stacked articles, such as spoons S or forks F, is disposed in each of the slots 32, which are of proper width to receive the shanks of the article handles. The ends of the handles may extend over the ledge. A plurality of knives K are also disposed in the tray, the handle of each knife being pushed against one of the tongues 36 and the corresponding strip 33 to displace the same and be frictionally held by the edges of the resulting slots, with its end preferably abutting the outer portion 14 of the wall 12. The blade of the knife is inserted in the aligned slit 31 of the folded support portion, in which it is securely held by friction. The parts

are so proportioned that the top edges, or backs, of the knives are substantially level with the top of the tray walls, the handles engaging the top portions 16.

A locking insert 38 is provided to hold the articles in the slots 32. This insert is shown in its flat or blank form in Fig. 6, comprising a sheet or strip of paperboard substantially corresponding in length and width to the panel 26 of the insert 18. At each end, the central portion of the strip is cut away to leave marginal portions along opposite side edges to serve as retaining projection fingers 39 extending longitudinally of the insert 38. Notches 40 are provided extending inwardly from the longitudinal edges of the insert, spaced to correspond to the slots 32 of the panel 26, each notch in one edge of the insert 38 being aligned with an oppositely extending notch in the opposite edge, the inner ends of opposed notches of course being spaced from each other. A central fold line 41 extends longitudinally of the insert between the inner ends of the opposed notches. The retaining projections 39, it will be noted, may be said to be offset outwardly of the inner ends of the notches, although the depth of each notch may vary.

To apply the insert 38, it is partially folded into V-configuration in cross section on the line 41 and pushed down in nested relation over the folded support portion of the insert 18, and over the articles in the slots 32 thereof, before the knives K have been disposed in the tray. The edges of the notches 40 engage the article handles and their inner ends engage over the handles of the topmost articles, closing the upper or central portions of the slots 32 and locking the articles therein, holding the stacked articles on the bottom and preventing upward movement thereof out of the slots 32. The depths of the notches 40 are such that their inner ends are spaced above the closed or lower ends of the slots 32, and define therewith apertures through which the article handles extend. The locking relation will be evident from Figs. 1, 3, and 4. The projections 39, like the main portion of the insert 38, lie against the support portion, and extend below the ends of the slits 31. The length of the projections is somewhat greater than the distance of the innermost slits 31 from the ends of the panel 26, and their width is substantially the same as the distance between fold lines 19 and 20 and the adjacent ends of the slits. With the insert 38 disposed over the support portion and the articles held thereby, the knives are inserted as previously described, so that the lower or cutting edges of the blades engage against the upper edges of the retaining projections 39. The knives thus hold the locking insert against moving upwardly off the support portion. Because the blades are very securely held in the slits 31 and also because the handles are well secured against any substantial movement, the knives anchor the insert 33 against all but the most severe thrusts of the locked articles. Movement of the articles against the locking insert ordinarily results from jolts sustained by the tray in shipment or other handling. The retaining arrangement is clearly shown in Figs. 1 to 3. A cover 43, shown in broken lines in Fig. 2, may be telescoped over the tray, and because the backs of the knives as well as the crest of the locking insert 38 lie substantially in the plane of the top portions 16 of the tray walls, the main panel of the cover will bear on the knives and crest to assist in preventing displacement of the insert.

For reasons of economy, a light stock is preferably used for the inserts 18 and 38, and in some cases the support portion might not be sufficiently strong to support the articles properly under all conditions of use. A reinforcing member 45 for the support portion may therefore be provided. As shown in its blank form in Fig. 7, the reinforcing member 45 is a strip of paperboard of the same length as the panel 26 and of slightly less width. At its ends, central portions between the side edges are cut away to provide projections 46 similar to the projections 39 of the locking insert 38. Slots 47 are formed in the member 45 between the cutaway portions, corresponding in size and location to the slots 32 of the support portion. A fold line 48 divides the member 45 longitudinally. The reinforcing member is folded on the line 48 and disposed under the folded support portion in nested relation therewith, the slots 47 substantially coinciding with the slots 32. The position of the member 45 is clearly shown by Figs. 2 to 4. The reinforcement provides a double thickness of material and gives the desired rigidity to the support portion. The end projections 46 extend under the blades of the knives in the slits 31, and abut the inner portions of the end walls. The reinforcing member is of course held against upward movement by the support portion itself, so that the projections 46 serve mainly to position the member 45 and not to secure it, and may be omitted if desired. These projections, however, facilitate assembly of the parts because they prevent longitudinal shifting of the member 45 relative to the support portion.

It will be seen that the invention provides a simple yet very effective means for securing the articles in the tray requiring no appreciable departure from standard packing procedure. The invention does not necessitate lifting and reinsertion of articles and article-supporting means in order to apply the locking means, or other manipulation of the parts or articles to secure the locking means, and thus saves time and possible marring of the tray or articles.

The present invention is not limited to use with flatware and the illustrative embodiment may be varied and adapted for use with other articles without departure from the principle disclosed, and may also be varied in details when employed with flatware.

Since many changes and variations of the disclosed embodiment of the invention may be made without departing from the scope of the inventive concept, it is not intended to limit the invention otherwise than as required by the appended claims, with due regard to the spirit as well as the literal wording thereof.

I claim:

1. The combination with a filled paperboard flatware-holding tray assembly including a flat bottom part and an elongated raised saddle part having outwardly and downwardly diverging sides and disposed medially of said bottom part, there being a transverse slot formed in said saddle part and having disposed therein the handle portions of a plurality of articles such as forks, spoons or the like, there also being a transverse

slit formed in said saddle part remote from the slot and having disposed therein a knife blade in frictional engagement with the walls of the slit, of a locking element for retaining said articles within the slot, said element comprising an elongated strip of paperboard material partially folded along a longitudinal center line and overlying the saddle part, said strip having diverging side walls overlying the side faces of the saddle part, there being a pair of aligned notches in said side walls in registry with the slot in said saddle part and straddling the handle portions of the articles, the intervening portion of the strip between the inner ends of the notches overlying the hump portion of the saddle part and closing the slot in the saddle part, and means on said strip and underlying said knife blade in engagement with the latter for holding said strip in article-holding position on the saddle part.

2. The combination with a filled paperboard flatware-holding tray assembly including a flat bottom part and an elongated raised saddle part disposed medially of said bottom part and having inclined sides, there being a plurality of spaced transversely extending slots formed through said saddle part and having disposed therein the handles of a plurality of articles of flatware, there being a plurality of spaced transversely extending slits formed through said saddle part and having disposed therein respective knife blades, of an elongated paperboard locking strip overlying said saddle part and having inclined side walls overlying the sides of the saddle part, there being a series of spaced pairs of aligned notches in said side walls in registry with said slots and each pair thereof straddling the handle portions of articles disposed in one of said notches, the medial regions of said strip in the vicinity of each slit being relieved of paperboard material to provide a part underlying a knife blade disposed in the slit.

3. The combination set forth in claim 2 in which the several slits formed in the saddle part are arranged in spaced relation and are isolated from the slots provided in the saddle part by being positioned adjacent one end of the latter and in which the relieved portions provide a continuous part underlying all of the knife blades disposed in said slits.

4. The combination set forth in claim 2 in which the several slits in the saddle part are arranged in spaced relation on one side of the slots and in which the relieved portions provide two continuous parts underlying all of the knife blades disposed in said slits on opposite sides of the saddle part respectively.

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