PACKAGE AND ENCLOSED TRAY THEREOF

Thomas S. Olsen, Pleasantville, N. Y., assignor to General Baking Company, New York, N. Y., a corporation of New York

Application March 29, 1949, Serial No. 84,240

2 Claims. (Cl. 229—72)

1 The present invention relates to a tray of relatively stiff paperboard-like material, or the like, to rest beneath an on-edge stack of slabs and be wrapped therewith within an outer flexible wrapper, and is an improvement upon the tray structure of my U. S. Patent No. 2,429,191, issued October 14, 1947; and to packages employing the same.

An object of the present invention is to provide such a package and the tray thereof so constructed as to permit simple manipulation of parts thereof inside the wrapper without necessitating ingress through the latter, so that an end of the tray may be turned, folded or rolled up for shortening as the supply of slabs in the wrapper is depleted by slab removal at the other end of the package.

Another object of the invention is to provide a structural embodiment which may be readily and economically constructed and allows efficient use and manipulation thereof.

Other objects of the invention will in part be obvious and will in part appear hereinafter.

The invention accordingly comprises an article of manufacture possessing the features, properties, and relation of elements which may be exemplified in the article hereinafter described and the scope of the invention will be indicated in the claims.

For a fuller understanding of the nature and objects of the invention, reference should be had to the following detailed description taken in connection with the accompanying drawings, in which:

Fig. 1 is a perspective view, with parts broken away, of an inverted package of sliced bread in which is enclosed an embodiment of the tray of the present invention;

Fig. 2 is an enlarged plan view of a tray blank of the present invention prior to the folding up of the side flanges for reception therebetween of the stack of slabs or slices;

Fig. 3 is a top plan view, with parts broken away and in section, of the package shown in Fig. 1 as it is normally rested on its side for removal of slices, indicating opening the package at the slot area in the bottom thereof and depicting removal of a slice through the slot;

Fig. 4 is a view similar to Fig. 3 indicating the package after removal of a number of slices therefrom and manipulation of an end of the tray in accordance with the present invention to permit folding of the end of the wrapper with crowding of slices toward the discharge slot;

Fig. 5 is a perspective view of a portion of the right hand end of the package shown in Fig. 3, indicating tray manipulation to permit the foreshortening of Fig. 4;

Fig. 6 is a perspective view of the tray in the condition shown in Fig. 4;

Fig. 7 is a view similar to Fig. 6 showing a second tray manipulation to obtain the second foreshortening for crowding of slabs or slices farther toward the discharge slot;

Figs. 8 to 13 inclusive are various views of another manner of package manipulation permitted by the tray structure of the present invention, Fig. 8 being a perspective view of a wrapped sliced loaf of bread indicating emptiness of one end of the package due to removal of the first group of slices and movement of the remainder toward the slotted end of the package;

Fig. 9 is a perspective view similar to Fig. 8, indicating the next step of wrapper manipulation, showing the empty end being flattened down onto the scored and uncovered end of the tray;

Figs. 8 and 9 were taken, being more nearly an end on view, showing the next succeeding step of manipulation of the side flaps of the tray inward;

Fig. 10 is another perspective view taken from a position different from that from which Figs. 8 and 9 were taken, being more nearly an end on view, showing the next succeeding step of manipulation of the side flaps of the tray inward;

Fig. 11 is an enlarged end elevation of the package with the tray flaps completely folded inward as proposed in Fig. 10, showing a single line section through the wrapper, tray end and its folded flaps in the area thereof where folded down together, and indicating in dot-dash lines position of the latter when turned up in the final step;

Fig. 12 is an enlarged end elevation of the package shown in Fig. 11, showing the final step of turn up of the flattened down wrapper end, inverted tray flaps and end of the tray to foreshorten the package after removal of the first group of slices, showing in dot-dash lines position of parts when more of the tray is turned up; and

Fig. 13 is another perspective view of the package shown in Fig. 12, following removal of a second group of slices therefrom and similar wrapper and tray manipulation with turn up of a greater amount of the flattened portions thereof.

It has been found, in connection with the use of the package structure of the above identified Patent No. 2,429,191, that it is desirable to foreshorten the package as slabs or slices are removed from within, and to accomplish this without breaking the package seal at the ends or opening of the wrapper in any area other than at the discharge slot. The embodiment of the present
invention shown in the drawings, wherein like numerals identify similar parts throughout, accomplishes this end in a desirable and effective manner. As therein shown, by way of example, a packaged, sliced loaf of bread 10 may comprise a plurality of slices 11—14 seated within a tray 12 of relatively stiff material, such as paperboard, and a flexible wrapper 13 which, as is usual, may be formed of waxed bread wrapping paper.

The tray 12 may be made as a blank from flat paperboard, substantially in the shape shown in Fig. 2, to comprise a bottom panel 14 and two side wall flange panels 15, 15, flanking the former and respectively defined therefrom by crimp or fold lines 18, 16. It is intended that the side panels 15, 15 are to be bent upward along fold lines 18, 16 to position them substantially at right angles to the bottom panel 14, as indicated in Fig. 1. The sliced loaf of bread 10 is then placed upon the bottom panel 14 between the side panels 15, 15, and this assembly is wrapped in the usual manner in a suitable wrapper, such as waxed paper, with the longitudinal edges overlapped at 17 and each end 18 tucked in and sealed closed in the orthodox manner.

In the embodiment of the tray 12 of the present invention shown in the drawings, the latter is preferably weakened for break-away, or completely severed at 20, 20, along fold lines 16, 16. The bottom panel 14 preferably also is weakened or completely severed transversely along line 21 so as to define a flap 22 which may be hinged along a transverse fold line 23 to provide a discharge slot 24, with the flap forming a closure therefor. When the sliced loaf 10 and its supporting tray 12 are suitably enclosed in the wrapper 13, the latter has an area 130 overlapping the flap, and which, if desired, may be adhesively secured thereto. The wrapper, of course, is either completely severed along the severed edges 20, 20 and/or 21 of the flap 22 and sealed by suitable means, such as sealing tape, to be stripped or broken in any suitable manner, or is weakened theretofore for break-away with the flap.

In accordance with the present invention, the tray blank 12 is, as best shown in Fig. 2, provided with one or more transversely-extending, fold-defining score lines. One such score line is shown at 36 adjacent the end of the tray blank 12 opposite the other end in which the flap-closed discharge slot is formed. If desired, as is preferred, a second similar transversely-extending score line 31 is also provided. Score line 30 defines on the bottom panel 14 a portion 32 of definite width, and the portion 33 of the bottom panel defined between score lines 30 and 31 is preferably of substantially the same, or, if desired, slightly less width than portion 32, so that the end of the tray may be lapped and overlapping back upon the tray proper for fore-shortening the same should the portions defined by score lines 30 and 31 be manipulated with the tray blank in the flat condition shown in Fig. 2. However, as indicated above, in the completed package the side wall panels 15, 15 are positioned substantially at right angles to the bottom panel 14, and the present invention permits this tray foreshortened with these panels in these positions in the following manner.

The ends of the transversely-extending score line 30 which extend across the side panels 15, 15 are substantially weakened for ready break-away. For example, each side panel 15 may be completely cut through along score line 30 except in one spot 34, so that with break-away at that spot side panel portion or flap 35 may be freed from side panel portion or flap 36. Similar weakening along transversely-extending score line 31 in 34—34 may be similarly employed. Although it is possible to practice the present invention with complete severance of the score lines 30 and 31 in the portions thereof which cross the side panels 15, 15, some difficulty may be in had in handling or manipulating the tray at the time of packaging with the flaps 35 and 36 of the side panels 15, 15 completely freed from each other. This difficulty may be overcome by temporary attachment, such as by small stickers or a readily breakable tape. However, for simplicity in production and use of the structure shown in Fig. 2, preferably small areas at 34—34 are left unsevered, with otherwise complete severance of the side panels 15, 15 along score lines 30 and 31.

In the use of the present invention, with manipulation of tray portions permitted by the present invention, successive slice removal will be had through the discharge slot 24. This will free from the package the slices 11 in the vicinity of the discharge slot 24, and with closure of the flap 22 and the covering wrapper area 130, the remaining slices may be broken down to the vicinity of the discharge slot, with an attendant formation of an empty space in the end of the package opposite the end in which the discharge slot is formed. This space may permit, in handling of the partially empty package, tip-over of slices therein interfering with the intended subsequent slice discharge. This is readily overcome by foreshortening of the packaging, which is permitted by the present tray structure in the following manner.

After a number of the slices 11 have been removed from the package to provide an empty space in the end thereof in the vicinity of score lines 30 and 31, one may break away the side panels flaps 35, 36 without opening the sealed wrapper by applying opposing pressure on those flaps through the wrapper as indicated in Fig. 5. As a result, the flaps 35, 36 will be broken away from flaps 35, 36 at the spots 34, 34 so that flaps 35, 36 may be folded inwardly a distance sufficient to pass on the inside of flaps 35, 36 with fold-up of portion 32 to the position indicated in Fig. 4. The resulting freed portion of the end of the wrapped tray may then be folded up in any suitable manner, such as indicated at 37 in Fig. 4, so as to completely foreshorten the package snugly to accommodate the depleted stack of slices therein. Further removal of slices 11 in the vicinity of the discharge slot 24 may then result in the structure shown in Fig. 4, after which a similar manipulation is performed.

Obviously, such manipulation would include the application of pressure on the outsides of flaps 35, 36 so as to break them away at 34, 34 from the main portions of the side panels 15, 15 to permit additional fold-up of the tray end to the dot-dash line position indicated in Fig. 4, and, of course, such action would be followed by a further folding up of the empty end of the wrapper.

The score lines 30 and 31 are graphically shown in Figs. 6 and 7. In Fig. 6, it is indicated that the application of pressure to the flaps 35, 36 not only broke them away from flaps 36, 36, but positioned the former inward of the latter for fold-up of the bottom panel
portions 32, with the parts disposed in the relative positions shown in Fig. 6. The second foreshortening step is shown in Fig. 7, wherein it is indicated that application of pressure on the outsides of flaps 36, 35 permits them to be swung to the insides of the major portions of the sides, and it will be understood that with this second folding or lapping back of the end of the tray, the bottom panel portion 32 now forms a filler piece which snugly remains in the discharge slot 24. It will be further understood that the application of the breaking pressure to the parts of flaps 35, 35 and 35, 35 respectively may be sufficient to cause first the flaps 35, 35 to be lapped completely back upon the bottom panel portion 32 to be folded up thereupon. Similar action relative to the flaps 35, 35 will result in complete lapping back thereof upon the bottom panel portion 33 so that the folded bottom panel portion 32 and flaps 35, 35 may be folded flatly down thereon with desired foreshortening of the tray, and to provide at the folded end thereof a flat roll of material, similar to that provided at the emptied ends of collapsible tubes with the manipulation so commonly practiced in the discharge of contents therefrom.

Another method of manipulation of the package featuring the tray of the present invention which may be easier for a housewife to practice is illustrated in Figs. 8 to 13 inclusive. As shown in Fig. 8, after removal of a group of slices 11-11 through the slot 24, the latter may be closed by its flap 22 and the slices then shaken down toward that end of the package to leave an empty space in the other end above the tray bottom portion 32. When the package then resting upon its bottom, as indicated in Fig. 8, the operator may then pull or crush the empty portion of the wrapper 13 down upon the end of the tray uncovered by the removal of slices or, in other words, down upon tray portion 32, such as at 38, as indicated in Fig. 9. The next step in the manipulation may then be application of pressure to the outer sides of the two side flaps 35-35 of the tray 12 to break them free from the remaining portions of the tray side flanges 15, 15, as proposed in Fig. 5, with portions of the flattened or crushed end of the wrapper 13, of course, being turned inward therewith, as indicated in Fig. 10. The relative positions of the parts after this second folding step are more clearly indicated in Fig. 11. In the latter, dotted line 33 indicates a final position of parts when the last folding step is performed, which is shown in full lines in Fig. 12. This constitutes a turning up of the folded ends of the part of tray 12 and the crushed end of the wrapper 13 along the fold line 33 extending transversely of the tray. As a result, the package is gusseted foreshortened with the slices remaining therein snugly held together to fill up the slotted end and assure pressure of slices adjacent the withdrawal slot 24.

In accordance with the procedure proposed in Figs. 8 to 13 inclusive, withdrawal of a second group of slices through the withdrawal slot 24 may be accomplished in a similar manner to provide in the package a second unfilled space at the folded end above the second bottom panel portion 33 of the tray 12. When this is done, the folded-up end portion 39 will be returned down to the plane of the remaining portion of the tray, such as to the position indicated in Fig. 11, and the additional empty portion of the wrapper 13 pulled or crushed down, as it was at 38, to overlap both the bottom panel portions 32 and 33 of the tray. Tray side flaps 36, 36 will then be folded inwardly, as in the case of inward folding of side flaps 35, 35 proposed in Fig. 10. Then both bottom portions 32 and 33 of the tray are folded up with the side flaps 35, 35 and 36, 36 and the wrapper folds which have been flattened or crushed down therewith, to produce the further foreshortening package shown in Fig. 13. As a result, the edge of the folded portions of tray and wrapper are lapped up substantially to the dotted position 43 indicated in Fig. 12, shown in full lines in Fig. 13.

In any event, regardless of the manner of manipulation adopted by the user of the package featured by the tray of the present invention, it will be readily seen that the objects set forth above and made apparent from the preceding description are efficiently attained. Since certain changes may be made in the above construction and different embodiments of the invention could be made without departing from the scope thereof, it is intended that all matter contained in the above description or shown in the accompanying drawings shall be interpreted as illustrative and not in a limiting sense. It is also to be understood that the following claims are intended to cover all of the generic and specific features of the invention herein described, and all statements of the scope of the invention which, as a matter of language, might be said to fall therebetweeen.

Having described my invention, what I claim as new and desire to secure by Letters Patent is:

1. A substantially flat tray blank of the type described comprising a rectangular piece of cardboard defined into three elongated panels having a plurality of continuing fold-defining, substantially parallel, longitudinally-extending, fold-defining score lines so that the side edges may be turned up to provide side wall panels flanking a bottom panel, said bottom panel being provided at one end with a discharge slot of such width longitudinally of said blank and dimension as to accommodate edge-wise discharge of at least one of a plurality of slabs of appreciable width and thickness adapted to be rested edgewise transversely on said bottom panel, said three panels having at the end opposite the slotted end of said bottom panel a pair of substantially parallel score lines extending transversely across all three of said panels with the distance between said score lines being substantially equal to the distance between the outermost one and the adjacent end of the blank, said transverse score lines being of a fold-defining type in the portions extending across said bottom panel and being of a weakened break-away type in the portions extending across said side wall panels.

2. A package comprising, in combination; a tray of relatively stiff paper-like material carrying thereon a plurality of product units successively to be removed from one end of the package and including an elongated bottom panel, and a pair of side wall flange panels flanking and hingedly connected to opposite sides of said bottom panel along substantially parallel, laterally-spaced, longitudinally-extending fold-defining lines with said side panels standing up substantially normal to said bottom panel along the sides of the product units, one end of each of said bottom panel and said side panels at the other end of said package having a plurality of continuing fold-defining, substantially parallel lines extending transversely substantially
thereacross to define at that end a plurality of banks of three transversely aligned foldable bottom and side panel portions with banks inward of the end bank being at least as wide as the latter to permit a progressive folding up of that end of said tray as the product units are successively removed from the other end of said package, the portion of each of said transverse lines which extend across said bottom panel being of the fold-defining hinge type to permit the progressive fold-up thereof, said side panels having the portions of each of said transverse lines extending thereacross of a character permitting ready separation of the foldable side portions from the remainder of said side panels by application of inward pressure on said side panel portions with the latter remaining hinged to said bottom panel; and an outer flexible wrapper enclosing said tray and the product units supported thereon openable at the first-mentioned end of said package for successive removal of said product units and permitting application through its side walls of the inward pressure to the separable and foldable side panel portions so that said foldable bottom panel portions can be turned up progressively with progressive removal of product units from the other package end to forshorten said tray at that foldable end without necessitating ingress through the wrapper at the latter end.

THOMAS S. OLSEN.

REFERENCES CITED
The following references are of record in the file of this patent:

UNITED STATES PATENTS

<table>
<thead>
<tr>
<th>Number</th>
<th>Name</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,037,839</td>
<td>Wagenseller</td>
<td>Apr. 21, 1936</td>
</tr>
<tr>
<td>2,429,191</td>
<td>Olsen</td>
<td>Oct. 14, 1947</td>
</tr>
</tbody>
</table>