CONTAINER WITH LOCKING COVER

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This invention appertains, in general, to containers constructed of solid fibreboard, corrugated fibreboard or any other suitable, bendable material.

Basket-like containers constructed of fibreboard and paperboard material are well known in the art. The fibreboard baskets and boxes are ordinarily utilized to carry fruits, vegetables and the like. Containers of this type customarily employ a unitary body member formed of a single fibreboard blank, and a cover member which is generally co-extensive in area and dimension with the top of the body member. Often employed are handle members secured to the body member of the container. The cover members are sometimes provided with fold lines which permit the cover to be bent to permit it to be placed on the container body beneath the handle member. There has been, however, a need for a cover member for containers of this type which would automatically lock onto the body member during shipment so as to protect the contents against damage. It is, therefore, an object of this invention to provide for a fibreboard-type carrying container, a self-locking, easily releasable cover member which will engage onto the container body to prevent accidental release therefrom.

It is a further object of this invention to provide, in a container of the type described, a locking cover member in which the cover member may be folded along a cover score line to disengage the locking elements from the container body.

A still further object of this invention is to provide, in a fibreboard carrying container, a locking means which will automatically engage into locking position and which locking means are disposed entirely within the interior of the wall structures of the container thereby preventing accidental release of the cover member.

Another object of this invention is to provide a self-locking cover member for a container, in which the locking elements of the cover member may be retracted inwardly from the container by bending the cover member about a pre-formed fold line.

A further object of this invention is to provide a cover locking device for a container in which the locking means are completely concealed from the interior and the exterior of the container body so as to prevent damage to the contents or accidental release thereof.

Other objects and advantages of this invention will be apparent to those skilled in the art upon a full and complete understanding of the construction of this device.

The invention also consists in the parts, arrangements and combinations of parts hereinafter described and claimed. The accompanying drawings form a part of this specification, and like numerals and symbols thereon appearing refer to like parts wherever they occur.

Fig. 1 is a plan view of a blank illustrating a container body embodying a preferred form of the invention; Fig. 2 is a plan view of a blank of a locking cover member embodying a preferred form of the invention.
in the free outer side margin 38 of each locking flap 34. The locking projection 39 engages into the locking voids 27 of the completed container. When the cover half panels 31 are in co-planar relation, the distance between the locking projections 39, as shown in Fig. 2, is greater than the exterior distance between the upstanding side wall top flaps 19 so as to provide an effective locking engagement between the body member A and the locking cover member B.

In the particular embodiment illustrated, it was found to be desirable in order to facilitate disengagement of the cover member B over the folded end wall construction of the container. The clearance shoulder 40 may be modified to conform with variations in the particular body member A employed.

The body member A may be erected by folding the end wall panels 14 upwardly about the end scores 13 into substantially right angular relation with the bottom panel 11. The end wall flaps 16 are then folded right angularly inwardly with respect to their adjacent end wall panels 14. The side wall end flaps 21 are then folded downwardly about their adjacent corner scores 20 into right angular relation to the side wall top flaps 19. The side wall panels 17 are then folded upwardly about the side wall scores 12 into right angular relation with the bottom panel 11. In this position the side wall top flaps 19 are folded inwardly and downwardly into flatwise contacting relation with the previously positioned end wall flaps 16. In this position, previously folded side wall end flaps 21 are disposed in flatwise, spaced relation to the inner faces of the end wall panels 14 with their free inner edges in substantially abutting relation, as shown in Fig. 4. The folding at or near the side wall end flaps 21 and the end wall panels 14 provides an access opening to receive locking elements of the cover member. Also, in the embodiment described, the locking voids 27 are disposed adjacent the space or void between panels 14 and the flaps 21. With this arrangement, it is possible to conceal, from both the interior and exterior of the body, the locking elements of the cover member. The securing tabs 22 are automatically positioned, as shown in Fig. 5, in the securing voids 23 to immovably lock and secure the side wall top flaps 19 into position. Also, the fastening tabs 24 are deformed slightly upwardly, as shown in Fig. 6, to engage onto the inner faces of the side wall end flaps 21 in the particular embodiment of the body member A illustrated, it would be noted that the end wall panels 14 are substantially shorter in height than the adjacent side wall panels 17 and the adjacent side wall end flaps 21. This is to provide a clearance space to facilitate the insertion of the locking elements of the cover member.

The cover member B may be erected by folding the locking flaps 34 downwardly about their adjacent end scores 35 into substantially right angular relationship with the longitudinal half cover panels 31 as shown in Fig. 8. The longitudinal half cover panels 31 are then bent downwardly about the central longitudinal cover score 32, as shown in Fig. 9, preferably until the inner end edges de-fining the wedge shaped cut out 36 of the locking flaps 34 are in abutting relationship. The locking flaps 34 are inserted between the side wall end flaps 21 and the end wall panels 14 until the side edges 33 are in contact with the upper edges of the side wall panels 17. The longitudinal half cover panels 31 are then folded downwardly into substantially co-planar relation with each other as best shown in Fig. 10, thereby engaging the locking projections 39 into the adjacent locking voids 27. An expanded view of the locking relationship is illustrated in Fig. 11. The act of engaging the locking projections 39 with the locking voids 27 may then be removed until the longitudinal half cover panels 31 are bent downwardly with respect to the central longitudinal cover score 32 to release and disengage the locking projections 39 from the locking voids 27. In actual practice, the cover is released by forcing the side edges 33 of the cover half panels 31 horizontally inwardly toward each other thereby forcing the center of the locking cover member B, defined by the central longitudinal cover member 32, inwardly. As the side edges 33 are drawn inwardly, the locking projections 39 are moved horizontally inwardly out of the concealed locking voids 27 thereby disengaging the locking means and permitting the cover member B to be lifted from the body member A.

It will be noted that when the cover member B is locked in position, the web portion 29 is securely received into the locking recess 37 to provide a secure inner locking engagement between the body member A and the cover member B.

As shown in the dotted line portion of Fig. 12, a handle member 41 may be employed if desired to facilitate carrying of the container.

It is to be understood that the embodiments herein described are illustrative and not restrictive, and it is also to be understood that the invention may be susceptible of embodiment in other modified forms, and that all such modifications which are similar or equivalent hereto come equally within the scope of the claims next appearing.

What I claim is:

1. A container having a body with upstanding side and end walls and a locking cover member, the cover member comprising a pair of half panels foldably connected together along a central fold line and having side marginal edges, each half panel being substantially co-extensive in length with the container body and having a locking flap foldably connected to each end thereof, each locking flap having an outer side margin and a lateral locking projection thereon, the body side walls having cooperating voids disposed adjacent the end margins thereof and spaced to receive the lateral locking projections on said cover end locking flaps when the cover member is positioned on the body member, the cover member being releasable from the body member when the side marginal edges of the half cover panels are moved horizontally inwardly along the central fold line thereby retracting the lateral locking projections from the cooperating voids in the body side walls.

2. A container having a body with upstanding side wall structures and end walls and a locking cover member, the cover member comprising a pair of longitudinal half panels foldably connected together along a central longitudinal fold line and having free marginal side edges, each half panel being substantially co-extensive in length with the container body and having a separate locking flap foldably connected to each end thereof, each locking flap having an outer side margin and a lateral locking projection thereon, the body side walls having cooperating voids disposed adjacent the end margins thereof and spaced to receive the lateral locking projections on said cover end locking flaps when the cover member is positioned on the body member, the cover member being releasable from the body member when the side marginal edges of the half cover panels are moved horizontally inwardly along the central fold line thereby retracting the lateral locking projections from the cooperating voids in the body side walls.

3. A container having a body and a locking cover member, the body having a bottom with foldably connected, upstanding side wall structures and end walls and body end flaps disposed in spaced, parallel relation to the inner face of the end walls, the locking cover member having a pair of half cover panels connected together along a central longitudinal fold line, each half cover panel being substantially equal in length to the length of the container body and having a depending end lock-
A container having a body and a cover locking member, the body having a bottom with foldably connected, upstanding side wall structures and end walls and body end flaps disposed in spaced, parallel relation to the inner face of the end walls, the locking cover member having a pair of half cover panels connected together along a central longitudinal fold line, each half cover panel being substantially equal in length to the length of the container body and having a separate, depending end locking flap foldably connected thereto, each end locking flap having free outer and inner side edges, said outer side edge having a locking projection extending laterally therefrom, said inner side edge being relieved to provide a clearance space between adjacent locking flaps, in the closed, locked position of the cover member, the locking flaps being disposed intermediate the body end wall and the spaced end flaps, the body side wall structure having cooperating voids therein positioned intermediate the body end walls and the end flaps and spaced to receive the locking projection on the cover locking flaps.

5. The invention set forth and claimed in claim 4 wherein the side marginal edges of the half cover panels of the locking cover member are adapted to be moved inwardly thereby flexing the half cover panels upwardly about the central longitudinal fold line to retract the laterally extending locking flaps inwardly from the locking voids in the body end walls to permit the cover member to be removed from the container body.

6. The invention set forth and claimed in claim 4 wherein the half cover panels are of sufficient width so that, in the closed, locked position of the cover member, their free longitudinal side edges extend in overlapping relation to the top margins of the container body side walls.

7. A container having a body and a locking cover member, the body having a bottom with foldably connected upstanding side and end walls and side wall end flaps disposed in spaced, parallel relation to the inner face of the end walls, the locking cover member having a pair of half cover panels connected together along a central longitudinal fold line, each half cover panel being substantially equal in length to the length of the container body and having a separate depending end locking flap foldably connected thereto, each end locking flap having a free outer side edge with a cut out portion disposed adjacent the foldable connection to the half cover panel and a laterally extending locking projection disposed adjacent the cut out portion, in the closed, locked position of the cover member, the locking flaps being disposed intermediate the body end walls and the spaced end flaps, the body side wall structure having a web portion adjacent the upper portions of the end margins thereof and a locking void positioned beneath said web portion, in the locked position of the cover member, the lateral projection on each cover locking flap being disposed outwardly through the locking void in the container side wall structure and the cut out portion in each locking flap receiving, in cooperating relation, the web portion in the upper portion of the end margin of the body side wall structure.

8. A container having a body and a locking cover member, the body having a bottom with foldably connected, upstanding side wall structures and end walls, the side wall structure being provided with folded-over top marginal side wall flaps disposed vertically downwardly in flatwise relation to the adjacent side walls, the side wall top flaps having foldably connected extensions forming end flaps positioned in spaced parallel relation to the inner face of the container end wall, the container end walls being provided with integral, foldably connected end extensions forming end wall flaps disposed intermediate and forming a part of the side wall structure, the locking cover member having a pair of half cover panels connected together along a central longitudinal fold line, each half cover panel being substantially equal in length to the length of the container body and having a separate, depending end locking flap foldably connected thereto, each end locking flap having a free outer side edge with a locking projection extending laterally therefrom in the closed, locked position of the cover member, the locking flaps being disposed intermediate the body end walls and the spaced end flaps, the body side wall structure having voids extending through the end wall end flap therein, said voids being disposed intermediate the body end walls and the end flaps and spaced to receive the locking projections on the cover locking flaps.

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