Dec. 22, 1953 R. H. JOHNSON 2,663,485

CONTAINER WITH CARRYING HANDLE

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Fig. 1

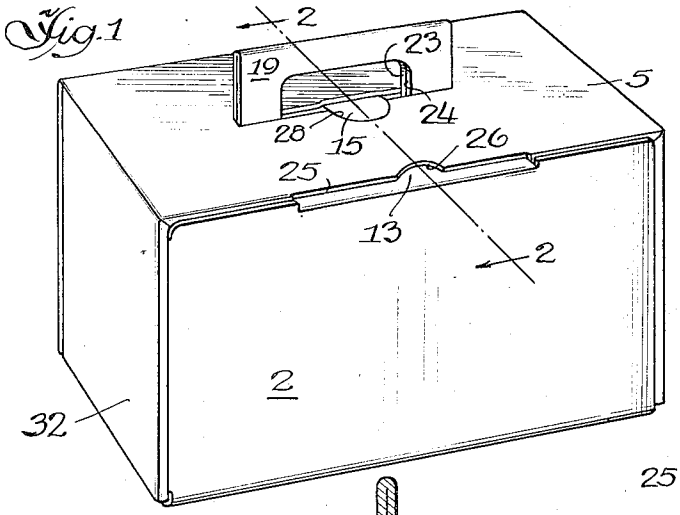
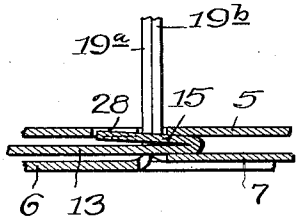


Fig. 4



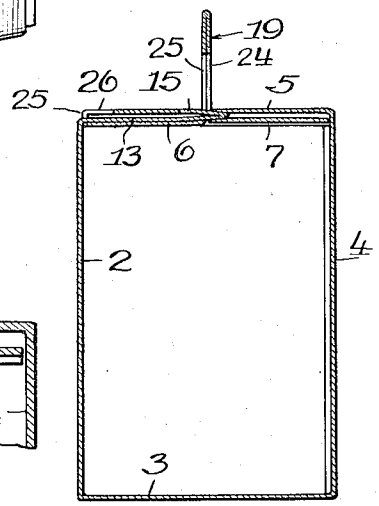


Fig. 3

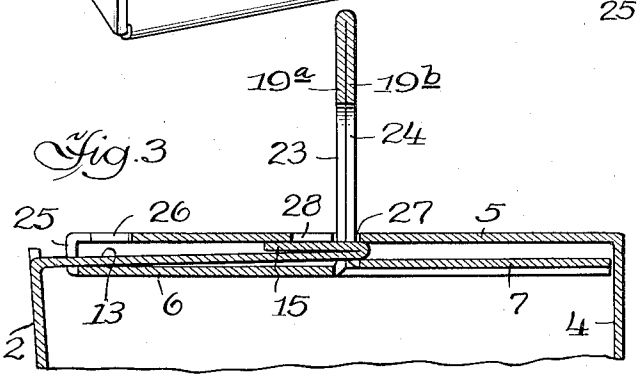
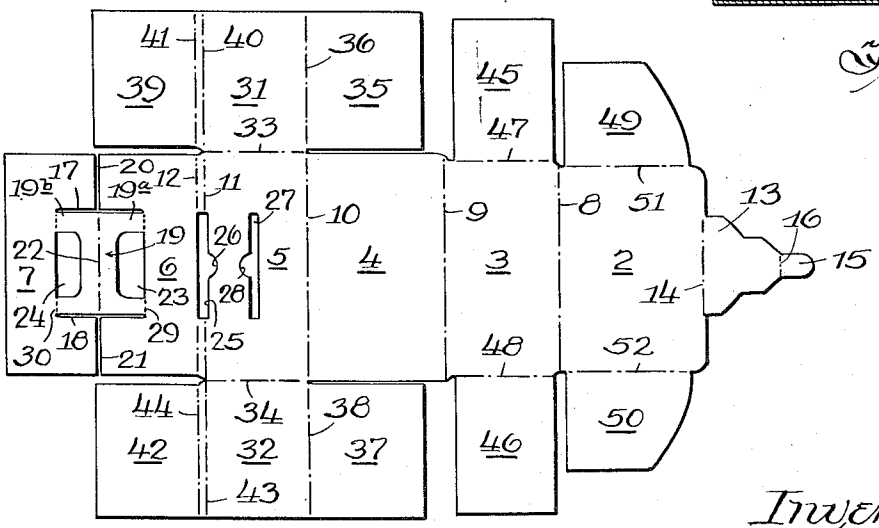


Fig. 2

Fig. 5



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Fig. 6

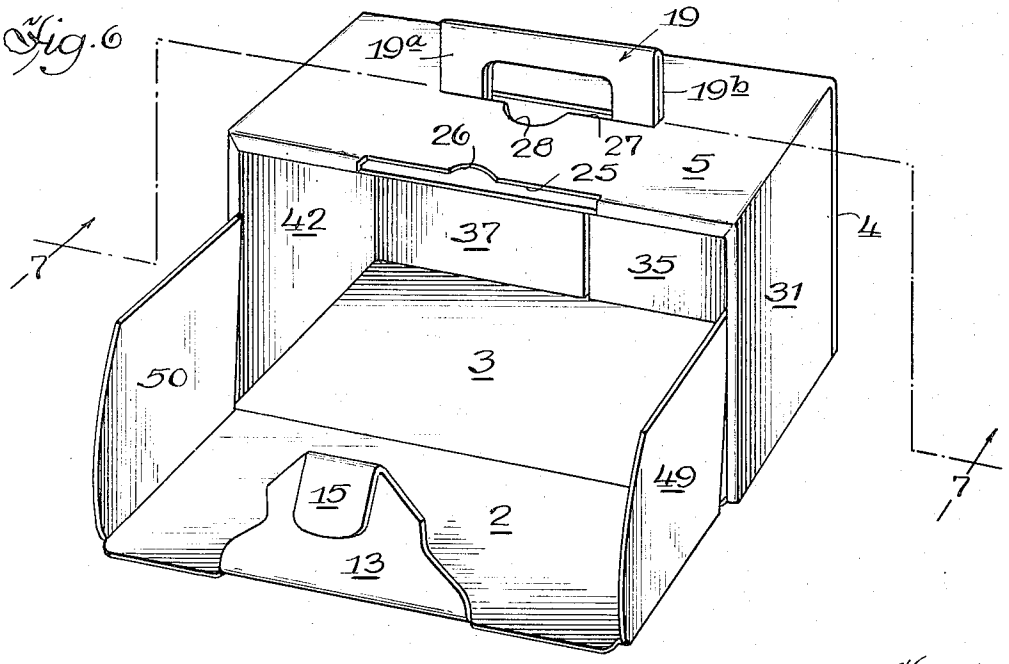


Fig. 7

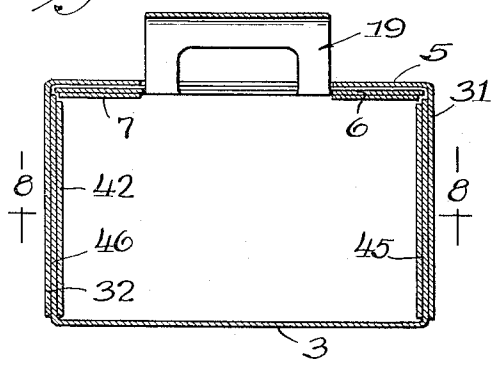


Fig. 9

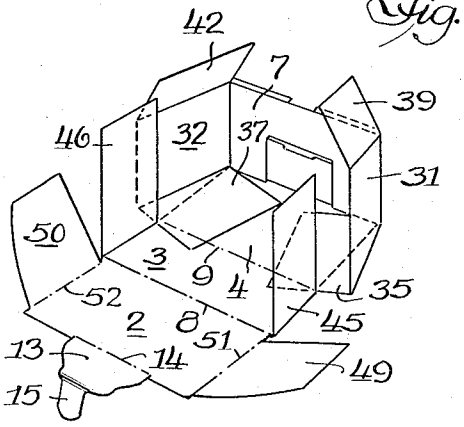


Fig. 8

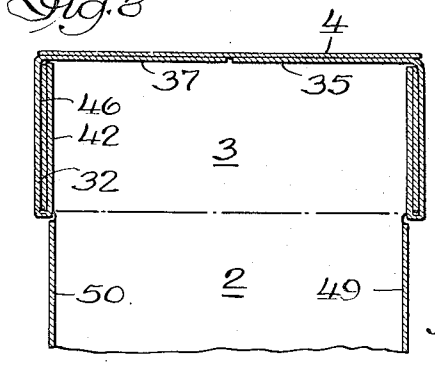
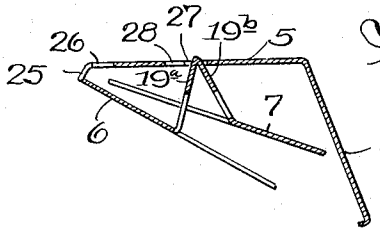


Fig. 10



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UNITED STATES PATENT OFFICE

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CONTAINER WITH CARRYING HANDLE

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Application May 2, 1951, Serial No. 224,188

6 Claims. (Cl. 229—16)

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This invention relates to a container formed of a single sheet of paperboard cut and scored to provide a durable container having an integral handle so that it may be used as a carrying case after it has passed into the hands of the ultimate consumer.

It is an object of the invention to provide a container that may be easily opened and reclosed, having positive interlocking means that will protect the contents against accidental opening of the container when it is being carried by its handle. It is a further object to provide a carrying container that may be used indefinitely.

Additional objects and advantages of the invention will become apparent upon reading the following description, taken in conjunction with the accompanying drawings showing a preferred illustrative embodiment of the invention, in which:

Fig. 1 is a perspective view of a container embodying the invention as such container appears in closed position;

Fig. 2 is a cross sectional view, taken along the line 2—2 of Fig. 1;

Fig. 3 is an enlarged fragmentary cross sectional view through the front panel showing the container in partially open position;

Fig. 4 is an enlarged fragmentary cross sectional view through the front panel with the closure flap in closed position;

Fig. 5 is a plan view of the blank from which the container is formed;

Fig. 6 is a perspective view of the container in open position;

Fig. 7 is a longitudinal sectional view, taken along the line 7—7 of Fig. 6;

Fig. 8 is a cross sectional view, taken along the line 8—8 of Fig. 7;

Fig. 9 is a perspective view of the blank in partially folded condition; and

Fig. 10 is a cross sectional detail view showing the method of forming the carrying handle.

Referring to Fig. 5 of the drawings, the blank comprises a single sheet of paperboard, preferably corrugated board or solid fibreboard, cut and scored to provide a front wall panel 2, bottom wall panel 3, back wall panel 4, outer top wall panel 5, inner top wall panel 6, and intermediate top wall panel 7. The front panel 2 is separated from bottom panel 3 by a score line 8. A similar score line 9 separates panels 3 and 4, and another score line 10 separates panels 4 and 5. Panels 5 and 6 are separated by a pair of closely spaced score lines 11 and 12 so that the panels are separated slightly to form a top wall of multiple thickness

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in the set-up container, with the inner panel 6 spaced from the outer panel 5 a distance sufficient to receive therebetween a tuck flap 13 hinged to front panel 2 along the score line 14 and having a locking tab 15 hinged to its opposite edge, as indicated at 16.

A pair of transverse cut lines 17 and 18 extending through adjacent portions of panels 6 and 7 define the edges of a handle 19 formed by superimposing flaps 19a and 19b formed from panels 6 and 7, respectively. Panels 6 and 7 are separated by cut lines 20 and 21 positioned on opposite sides of the handle and extending respectively from cut lines 17 and 18 to opposite edges of the panels. The flaps 19a and 19b are hinged along a score line 22 and openings 23 and 24 cut in flaps 19a and 19b, respectively, provide hand holds for the handle when the container is set up.

A longitudinal slot 25 is positioned substantially between the fold lines 11 and 12 to provide a passageway for the closure flap 13. In the center portion of that edge of panel 5 which defines the rear boundary of the slot 25 is a notch or cut out 26 which provides finger space for the application of pressure on the flap 13 when it may be desired to open the container. The panel 5 is provided with a longitudinal slot 27 disposed centrally thereof for the projection of a handle 19. The center portion of that edge of panel 5 which defines the forward boundary of the slot 27 is provided with a notch or cut out 28 which is directed toward the slot 25 thereby to provide space for the reception of locking tab 15. When the container is set-up and the closure flap 13 has been pushed into position between the outer panel 5 and the compound inner panel 6—7 through the slot 25 thereby to close the front panel 2, the locking tab 15 will be aligned with the notch 28 and, by reason of the score tension on the locking tab of the illustrated form of the invention, the tab 15 may snap up or rise to engage the edge of panel 5 in the notch 28, thereby to provide a positive lock to prevent the opening of the front panel 2 unless the tab 15 is again depressed to clear the edge of the outer panel 5.

The first step in setting up the container from the blank form is concerned with the handle 19. The panel 7 is slid inwardly to superimpose it on panel 6, the handle flaps 19a and 19b folding simultaneously along score lines 29 and 30, respectively, and along the common score line 22. Panel 7 is held against panel 6 and panel 6 is then folded along score lines 11 and 12 to insert the doubled top edge of handle 19, which is defined

by the fold line 22, through the slot 27 to position the handle on the outside of the top panel 5 with the hand hold defined by the openings 23 and 24 adjacent the surface of panel 5. The panels 6 and 7, from which the handle 19 extends, are disposed underneath the top panel 5.

The top panel 5 has outer end panels 31 and 32 hinged thereto along opposite ends, as indicated at 33 and 34, respectively. Panel 31 has a flap 35 hinged thereto along the score line 36, and panel 32 has a flap 37 hinged to it along score line 38. Flaps 35 and 37 fold against back panel 4 when the container is set up. An inner end flap 39 is hinged to the opposite side of panel 31 by a pair of parallel score lines 40 and 41, and an inner end flap 42 is similarly hinged to panel 32 by a pair of parallel score lines 43 and 44. In the set up container these inner end flaps 39 and 42 are folded against intermediate end flaps 45 and 46, respectively. Flap 45 is hinged to one end of the bottom panel 3 along the score line 47, and the flap 46 is hinged to the opposite end of the bottom panel along score line 48.

In the set up container the intermediate end flaps 45 and 46 are folded against the inner surface of the outer end panels 31 and 32, and the inner end flaps 39 and 42 are then folded against the intermediate end flaps 45 and 46 to interlock the top, bottom, back, and end walls with the container in set up condition and the front wall 2 open. This interlocking of the container walls with the front wall open is advantageous in connection with the use of the container by the ultimate consumer after the container has fulfilled its original purpose. The container is ordinarily left in set up condition, with the front wall closed, and the ultimate consumer of the original package merely opens the front wall 2, which is hinged to bottom wall 3 along the score line 8, to gain access to the contents. To use the container as a carrying case it is necessary only to close the front wall. For example, if a pair of skates is originally packed in the container, the purchaser of the skates may keep them in the container to carry them to the skating rink and then remove them by opening the front wall. In order to carry the skates back home, it is not necessary to set up the entire container, but only to close the front wall 2. Similarly, if food, such as a ham, is packed in the container, it may be carried to a picnic, and the container then used as a hamper to bring home the left over food.

The front panel 2 is provided with a pair of end flaps 49 and 50, hinged along score lines 51 and 52, respectively. The flaps 49 and 50 are folded inside inner end flaps 39 and 42, respectively, and the closure flap 13, with locking tab 15 reversely folded, as shown in Fig. 6, is then inserted through slot 25. When the free end of tab 15 passes the edge of panel 5 defining the notch 28 its score tension causes the tab to spring outwardly or upwardly to engage with or to extend into proximity to that edge of panel 5 which defines the notch 28 thereby to provide an interfering relationship. The engagement of the free end of the tab with the adjacent edge of panel 5 in the notch 28 will prevent accidental displacement of the closure flap 13 and panel 2 in the opposite or outward direction. In order to open the container, finger pressure is applied first to the tab 15 to depress the same below the interfering edge of panel 5 within the notch 28 and while the tab is held in such depressed position, finger pressure through the notch 26 may be utilized to move the closure flap 13 outwardly

through the slot 25 thereby to open the container to the position of the parts illustrated in Fig. 6.

When the packed container is carried by the handle, the weight of the contents against the bottom of the container tends to pull the panels 6 and 7, from which the handle extends, closer to the top panel 5, thereby diminishing the thickness of the open slot 27 and pinching the flap 13 between the panels 5 and 6. Accordingly, there is no tendency for the front wall 2 to open accidentally when the container is being carried by the handle, regardless of the weight of the contents, because the squeezing action between panels 5 and 6 does not leave sufficient space for the closure flap 13 freely to slide therebetween even if the tab 15 should be released. When the container is provided with a locking tab 15 additional security against the accidental opening of the front wall 2 is provided because the locking tab cannot pass through the opening formed by the slot 27 and the notch 28 unless it is pressed below the plane of top panel 5. In addition, the panel 6 must be spaced from panel 5 a distance sufficient to allow closure flap 13 and locking tab 15 simultaneously to pass therebetween.

While the foregoing description sets forth a preferred embodiment of the invention in considerable detail, many changes may be made in the construction without departing from the spirit of the invention, and it is therefore desired that the present embodiment be considered in all respects as illustrative and not restrictive, reference being had to the appended claims rather than to the foregoing description to indicate the scope of the invention.

I claim:

1. A container having a top wall comprising spaced upper and lower panels hingedly connected together along a hinge line joining one edge of each, there being a slot along said hinge line between said upper and lower panels, there being a second slot in said upper panel, a handle carried by said lower panel and projecting through the second slot, a front wall having a tuck flap slidable through the first mentioned slot, and a locking tab integral with the tuck flap, the locking tab being movable into register with the second slot and engageable with the forward edge of the latter to lock the front wall in closed position.

2. A container having a top wall comprising a pair of spaced panels hingedly connected together, one of the panels being disposed outward of the other, the panels together presenting an open slot along their common hinge line, there being a second slot in the outer panel, there being a notch in the forward edge of the outer panel, said notch opening into the second slot, a handle projecting through the second slot, a front wall having a tuck flap integral therewith, said tuck flap being slidable through the first mentioned slot, and a locking tab hingedly connected to the tuck flap, said tab being bendable out of the plane of the tuck flap so as to intersect the plane of the outer top wall panel through said notch when said front wall is closed to lock the latter in closed position.

3. A container having a top wall comprising an outer panel, an inner panel spaced from the outer panel and an intermediate panel adjacent to the inner panel, a pair of end walls, a back wall, a bottom wall, and a front wall hinged at one edge to the bottom wall, the top, end, back and bottom walls being interlocked to hold the container in set-up condition, there being a slot adjacent to

the front edge of the top wall, there being a second slot in the outer panel, a handle integral with the intermediate and inner panels projecting through the second slot, a tuck flap integral with the front wall and insertable through the first slot to close the front wall, and a locking tab extending from the tuck flap and engageable with the edge of the top panel adjacent to the second slot when the front wall is closed to prevent accidental opening of the front wall.

4. A container having a top wall comprising an outer panel, an inner panel spaced from the outer panel and an intermediate panel adjacent to the inner panel, a pair of end walls, a back wall, a bottom wall, and a front wall hinged at one edge to the bottom wall, the top, end, back and bottom walls being interlocked to hold the container in set-up condition, there being a slot adjacent to the front edge of the top wall, there being a second slot in the outer panel, a notch extending forwardly from the forward edge of the second slot, a handle comprising a pair of flaps projecting through the second slot in face-to-face contact, one of the flaps being integral with the intermediate panel and the other flap being integral with the inner panel, whereby the weight of contents in the container exerting force against the bottom wall when the container is carried by the handle urges the intermediate and inner panels against the outer panel, a tuck flap hinged to the front wall and insertable through the first slot into the space between the outer and inner panels of the top wall, and a locking tab integral with the tuck flap, the free end of the locking tab being engageable with the outer panel in the notch to prevent accidental opening of the front wall.

5. A blank for a container comprising a sheet of paperboard cut and scored to provide three top wall panels, a bottom wall panel, a front wall panel, a back wall panel, and a pair of end wall panels, there being a slot along a portion of the line of fold between the outer top wall panel and the inner top wall panel, there being another slot in the outer top wall panel, a pair of flaps in the intermediate and inner top wall flaps adapted to be moved into face-to-face contact to form a handle insertable through the second

mentioned slot, a tuck flap integral with the front wall panel insertable through the first mentioned slot, and a locking tab integral with the tuck flap and capable of projection through said second mentioned slot into the plane of the outer top wall panel.

6. A container having a top wall comprising an outer panel, an inner panel spaced from the outer panel and an intermediate panel adjacent to the inner panel, a pair of end walls, a back wall, a bottom wall, and a front wall hinged at one edge to the bottom wall, the top, end, back and bottom walls being interlocked to hold the container in set-up condition, there being a slot extending along a mid-portion of the front edge of the top wall, there being a second slot in the outer panel, a handle comprising a pair of flaps projecting through the second slot in face-to-face contact, one of the flaps being integral with the intermediate panel and the other flap being integral with the inner panel, whereby the weight of contents in the container exerting force against the bottom wall when the container is carried by the handle urges the intermediate and inner panels against the outer panel, a tuck flap hinged to the front cover and removably insertable through the first said slot into the space between the outer and inner panels of the top wall, and a locking tab integral with the tuck flap and disposed in register with a portion of the first said slot when the tuck flap is disposed between the outer and inner top wall panels, the free end of the locking tab being engageable with the said slot portion to prevent accidental opening of the front wall.

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