

Nov. 3, 1942.

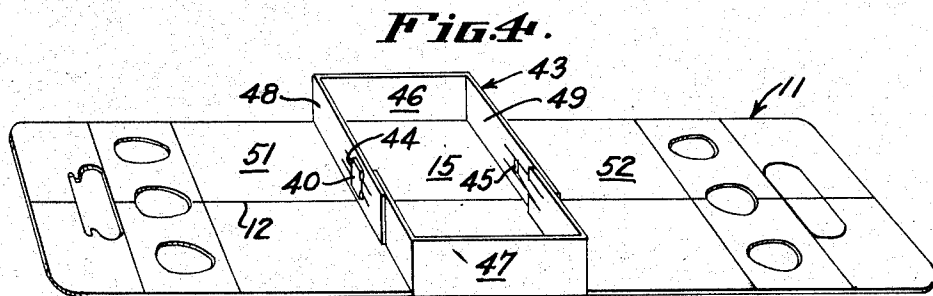
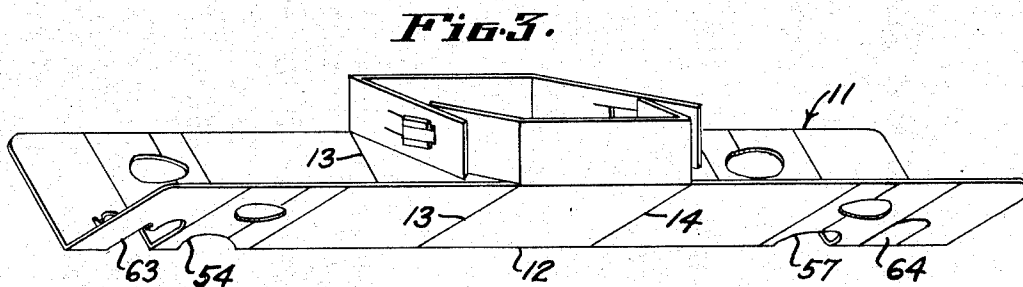
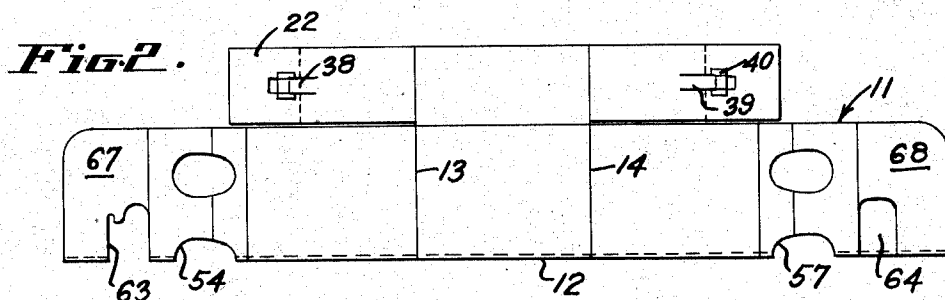
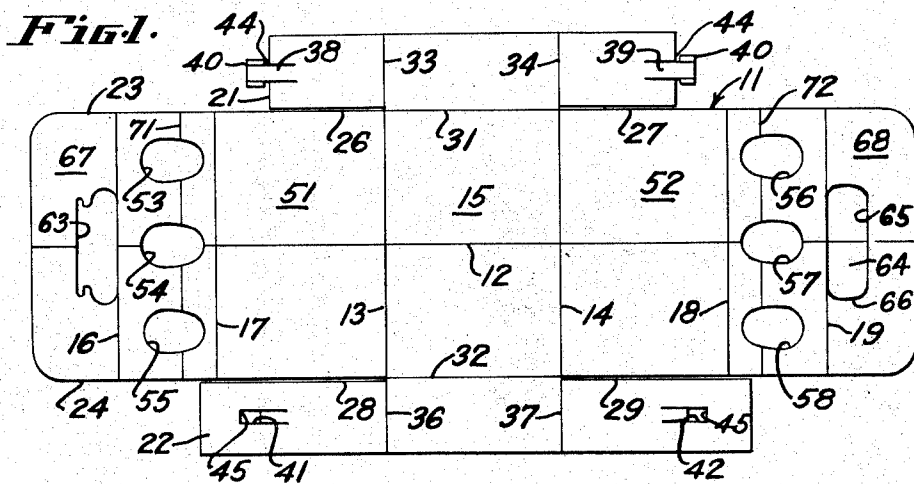
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2,300,874

CARRYING CASE, BOX, AND THE LIKE

Filed Sept. 27, 1939

3 Sheets-Sheet 1



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3 Sheets-Sheet 2

Fig. 5.

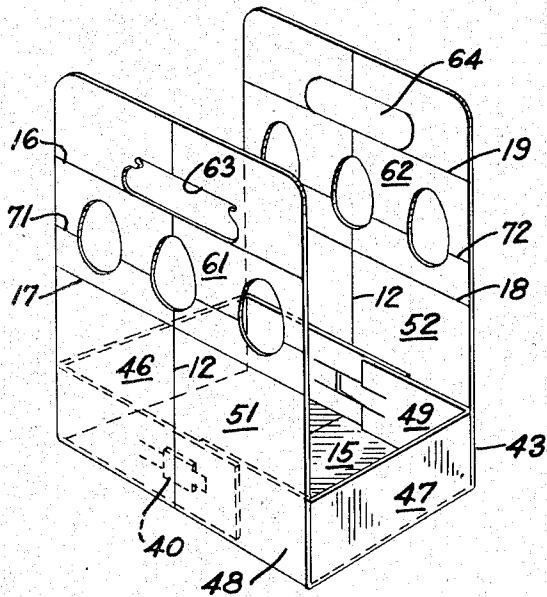


Fig. 7.

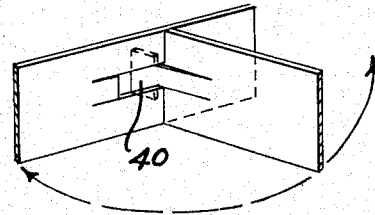


Fig. 6.

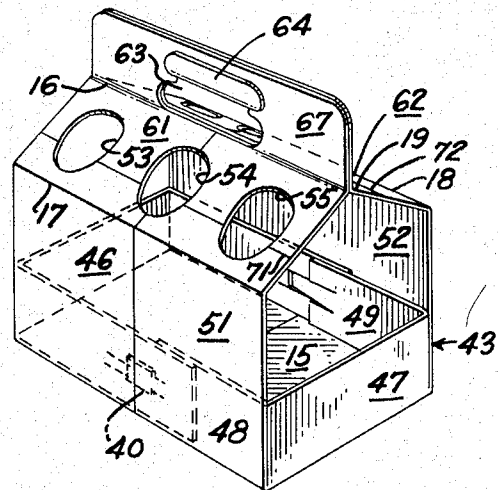
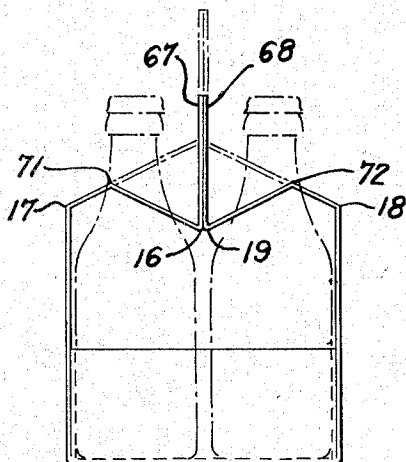


Fig. 8.



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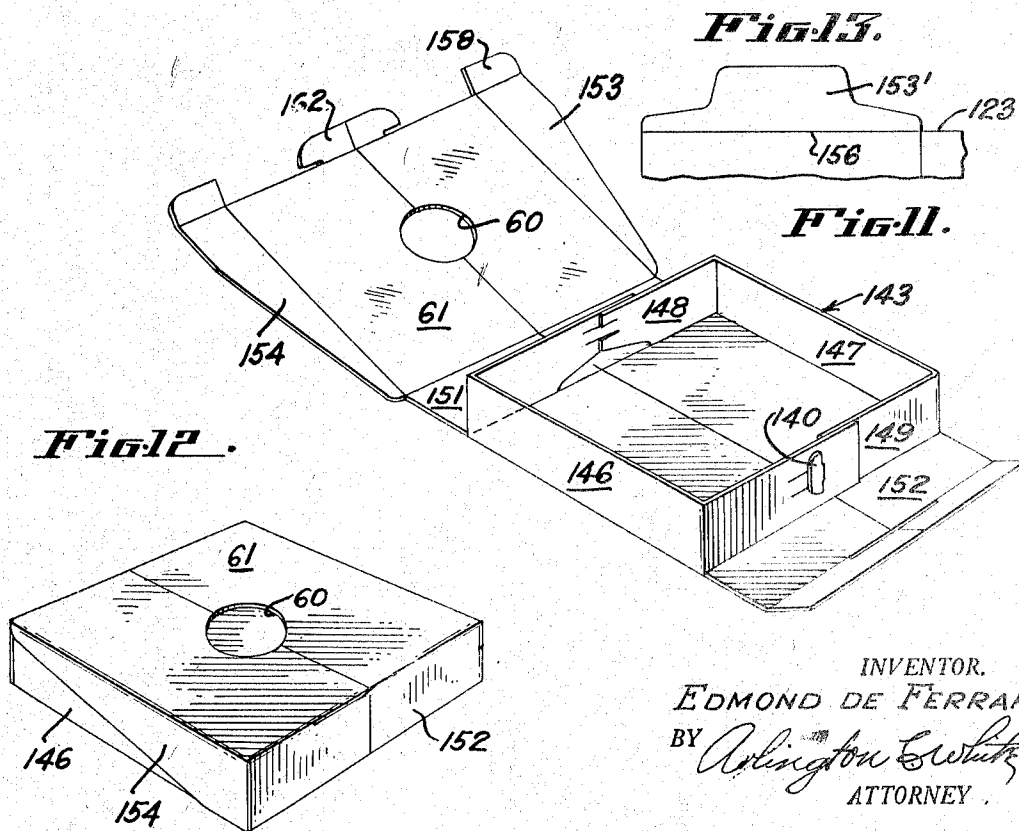
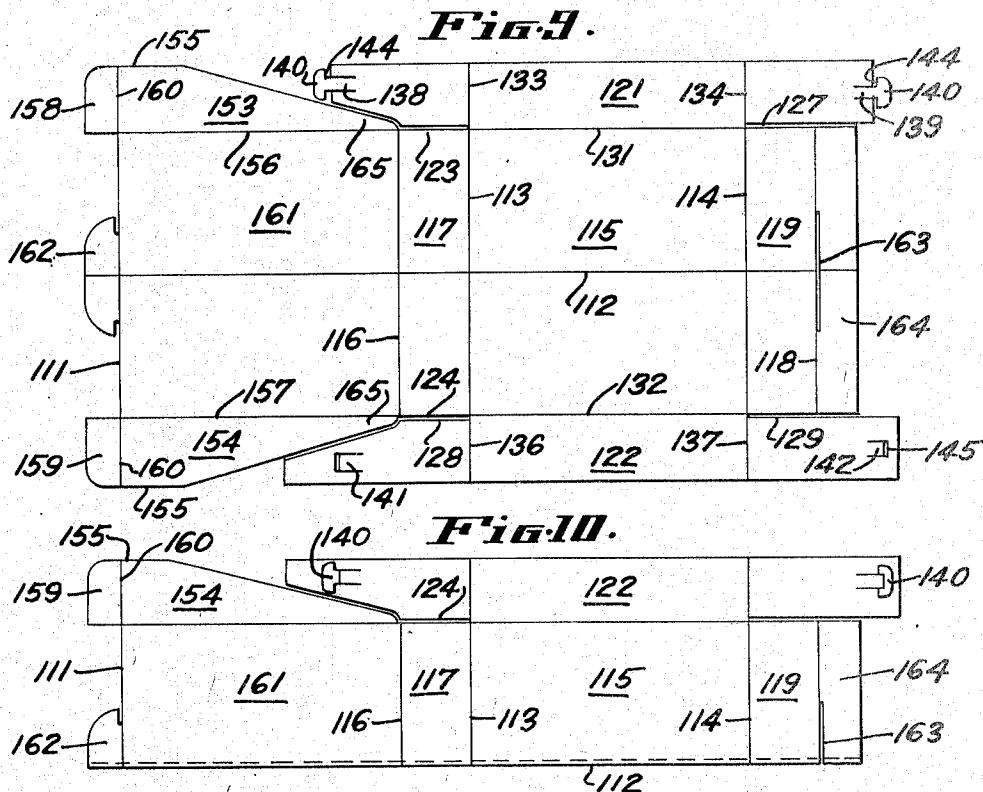
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CARRYING CASE, BOX, AND THE LIKE

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3 Sheets-Sheet 3



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UNITED STATES PATENT OFFICE

2,300,874

CARRYING CASE, BOX, AND THE LIKE

Edmond de Ferrari, San Francisco, Calif.

Application September 27, 1939, Serial No. 296,787

1 Claim. (Cl. 229—36)

The invention, in general, relates to means for holding and carrying items of merchandise and more particularly relates to foldable carrying cases, cartons, boxes or the like.

A primary object of my invention is to provide means for automatically forming a subcompartment in a carrying case upon the setting up of the case from a blank.

Another object of the invention is to provide a foldable case, carton, box or the like which may be formed from a single blank and which can be converted in a minimum of time from a flat folded blank to a form for the reception of merchandise.

A still further object of my invention is to provide a novel method of manufacturing a carrying case of the aforementioned character.

Another object of the invention is to provide a carrying case for individual articles of merchandise which is additionally characterized by the provisions of means enabling stacking of the cases in tiers.

A still further object of the invention is to provide devices of the aforementioned character which can be shipped or delivered in flat, folded form in condition for automatically setting up a sub-compartment therein in one operation.

Another object of the present invention is to provide a device of the indicated nature which lends itself to pleasing display motifs.

A still further object of my invention is to provide folding carrying cases or boxes incorporating means for preventing dislodgement or displacement of the contents thereof.

Other objects of the invention, together with some of the advantageous features thereof, will appear from the following description of a preferred embodiment of my invention as illustrated in two exemplifications thereof in the accompanying drawings.

It is to be understood that I am not to be limited to the precise embodiment nor precise exemplifications of my invention shown in the drawings, as my invention, as defined in the appended claim, can be embodied in a plurality and variety of forms.

Referring to the drawings:

Figure 1 is a plan view of a preferred embodiment of my invention, as exemplified in a carrying case for bottled goods, this view showing the case blanked out, extended and unfolded.

Figure 2 is a plan view, in folded condition as shipped or delivered to users, of the embodiment of my invention shown in Figure 1.

Figure 3 is a partial perspective view of the

preferred embodiment of the invention, as exemplified in a carrying case for bottled or canned goods, this view illustrating the automatic formation of the subcompartment in a single operation preliminary to the completion of the case.

Figure 4 is another partial perspective view of the preferred embodiment of my invention, as exemplified in a carrying case for bottled or canned goods, this view showing the result of complete unfolding of the blank, as shown in Figure 2.

Figure 5 is another perspective view of the embodiment of Figure 1 as the case appears just prior to fastening the grip members together, a portion of the subcompartment being shown in dotted lines.

Figure 6 is still another perspective view of the preferred embodiment of my invention, as exemplified in a carrying case for bottled or canned goods, this view showing the set up case with exception of contents, as taken away by the customer; a portion of the sub-compartment being shown in dotted lines.

Figure 7 is an enlarged detail of the sliding joint employed in the preferred embodiments of the invention.

Figure 8 is an end elevational view of the preferred embodiment shown in Figure 6, this view illustrating in dotted and full lines the shiftable position of the top to permit stacking of the cases one upon another.

Figure 9 is a plan view of a preferred embodiment of my invention, as exemplified in a cake box, this view showing the box/blanked out, extended and unfolded.

Figure 10 is a plan view, in folded condition, of the embodiment shown in Figure 9, as delivered to users.

Figure 11 is a partial perspective view of the preferred embodiment of the invention, as exemplified in a foldable cake or pie box, this view showing the box partially set up and in condition for the reception of the cake or pie.

Figure 12 is a perspective view of the embodiment of Figure 11, as taken away by the customer.

Figure 13 is a plan view of a modified form of one detail of the cake box exemplification of the invention.

It will be appreciated upon a study of the annexed drawings and following description that the invention is adaptable for embodiment in a multiplicity of forms including a florist box, candy box, shipping containers, hat

or shoe boxes and the like. The invention can best be explained and illustrated with respect to specific blanks and cartons, cases or boxes formed therefrom and I have accordingly shown exemplifications of the preferred embodiment of the invention in the forms of a carrying case for bottled or canned goods, and a cake or pie box without intending to limit myself to such illustrative exemplifications.

In its preferred form, the carrying case, carton, box or the like of my invention preferably comprises an elongated blank having a pair of flaps extending from opposite lateral sides thereof; said blank having a longitudinal, medial score line therein, means on said flaps for interlocking the flaps together while said blank is folded on said longitudinal medial score line, and score lines on each of said flaps; unfolding of said blank with said flaps connected together providing a subcompartment for said case, box or the like, the walls of which are defined by the score lines in said flaps.

In accordance with my invention, as exemplified in carrying case for bottled goods, I provide an elongated blank 11 which preferably is fabricated of paste-board, cardboard or the like and which can be corrugated, if desired. The blank 11 is formed with a longitudinal medial score line 12 therein and I will hereinafter refer to score line 12 as the main fold line of the blank. In addition to score line 12, the blank 11 is provided with a series of transversely disposed score lines of which lines 13 and 14 are formed near the longitudinal center of the blank but spaced apart, as shown, to define an area 15 which constitutes the bottom of the carrying case exemplification of the preferred embodiment of the invention. Transverse score lines 16 and 17, in spaced relationship are also formed in the blank 11 adjacent one longitudinal extremity thereof, while two additional transversely disposed and spaced score lines 18 and 19 are formed in the blank adjacent to the other longitudinal extremity thereof.

As particularly illustrated in Figure 1 of the drawings, the blank 11 for the carrying case exemplification of my invention is formed with a pair of integral flaps 21 and 22 extending from the opposite lateral extremities 23 and 24, respectively, of the blank. Flaps 21 and 22 may be made to any width desired and I preferably form the flaps 21 and 22 for the carrying case to an appreciable width for the purpose hereinafter specified. It is to be observed that I preferably form one of the flaps, and in the embodiment illustrated it is the flap 22, longer than the other flap. In accordance with the invention, the blank 11 is slitted along its lateral extremities 23 and 24, or at the juncture of the flaps and the main body of the blank, as at 26, 27, 28 and 29, and I also form score lines 31 and 32 at these junctures but between the transverse score lines 13 and 14 so that the flaps 21 and 22 may be folded on the score lines 31 and 32, respectively. In addition, I also form transverse, spaced score lines in each of the flaps 21 and 22 and arrange these score lines in the flaps in alignment with the transverse score lines 13 and 14 so as to constitute extensions thereof. As shown, flap 21 is provided with transverse score lines 33 and 34 and flap 22 is provided with score lines 36 and 37.

Means are provided on flaps 21 and 22 of the blank 11 for fastening the two flaps together. While any suitable means for effecting this result may be employed, I preferably utilize fastening means as illustrated in enlarged detail in Fig-

ure 7 of the drawings. As shown, one of the flaps is provided with stamped out tongues at each longitudinal extremity thereof and which extend therefrom while the other flap is slotted for passing the tongues of the other flap. Thus, there are provided sliding joints connecting the two flaps 21 and 22. With particular reference to Figure 1 of the drawings, flap 21 is so stamped as to form thereon at each longitudinal extremity tongues 38 and 39, each tongue having an enlarged end 40. The other flap 22 is formed with a pair of slots 41 and 42 adjacent opposite lateral extremities thereof but so arranged as to register with the enlarged ends 40 of tongues 38 and 39 of flap 21 when the blank 11 is folded on longitudinal, medial score line 12, see Figure 2 of the drawings. Since the flaps 21 and 22 as well as tongues 38 and 39 thereof are fabricated from relatively thin cardboard or like flexible material, the ends 40 of the tongues 38 and 39 can readily be flexed and passed through the slots 41 and 42 of flap 22 when the blank 11 has been folded as shown in Figure 2, thus interlocking the two flaps. It is to be noted, as indicated in Figure 7, that the joints between flaps 21 and 22 are sliding joints since the slots 41 and 42 of flap 22 are of sufficient length to permit sliding movement therein of the tongues 38 and 39 of flap 21, see line and arrow showing of Figure 7 indicating relative movement of flaps.

It is to be particularly observed that the blank 11 of the carrying case exemplification of my invention is stamped and scored, as shown in Figure 1 of the drawings, but that before the blank is delivered to the trade for packaging with bottled or canned goods, the blank preferably is folded along longitudinal medial score line 12 and the flaps 21 and 22 connected together as above described and as illustrated in Figure 2 of the drawings, in which condition it is shipped or delivered to the trade in flat form.

In Figures 3 and 4 of the drawings, I have depicted the preferred embodiment of my invention, as exemplified in a carrying case for bottled goods, as it is being unfolded as well as completely unfolded for packing. It is to be particularly observed that the unfolding of the blank 11 from the condition shown in Figure 2 automatically forms a sub-compartment 43 of which the area 15 defined by transverse score lines 13 and 14 in the blank 11 constitutes the bottom while the sides thereof are formed by the connected flaps 21 and 22. These walls or sides of sub-compartment 43 are automatically set up in unfolding the blank 11 by virtue of the transverse score lines 33, 34 of flap 21 and transverse score lines 36, 37 of flap 22 as well as by virtue of the fact that the flaps have been fastened together by reason of the sliding joints formed by the tongues 38 and 39 of flap 21 and slots 41, 42 of flap 22. It may be observed that if the flaps 21, 22 are only fastened together at one extremity thereof, and the fastening means 39, 40, 42 were eliminated from the other extremity of the flaps, a user can set up sub-compartment 43 with one side thereof unconnected. The fact that one side is unconnected will not prevent the forming of the completed case as the side walls of the completed case will align the unconnected portions of the flaps of the sub-compartment. Reference to Figures 3 and 4 of the drawings will clearly bring out that the edges 44 of each of the ends 40 of tongues 38 and 39 move into engagement with the ends 45 of slots 41 and 42 as the blank 11 is unfolded, this action resulting in folding corresponding portions of

opposite flaps 21 and 22 about the transverse score lines of the flaps to define the side and end walls of the sub-compartment 43. The tongues 38 and 39 exert sufficient force upon the ends 45 of slots 41 and 42 not only to lift up the end and side walls of sub-compartment 43 but also to make and hold these walls appreciably rigid. For convenience of description, the reference numerals 46 and 47 have been used to designate the end walls of sub-compartment 43 while the reference numerals 48 and 49 have been used to designate the side walls thereof, see Figure 4 of the drawings.

The specific exemplification of carrying case embodying my present invention which is shown on the annexed drawings is designed for holding and carrying bottled goods, such as beverages, and the case illustrated will hold six bottles of the standard size of bottle now used. It is to be appreciated that the case can be enlarged or diminished and score lines altered slightly as to position to accommodate any desired number or any size of bottles. At all events, the carrying case exemplification of my invention will take the form shown in Figure 4 of the drawings when unfolded from the condition shown in Figure 2 and, upon completion of forming the sub-compartment 43, the case is ready for packing of bottles, or cans as the case may be. After the goods have been placed or nested in the sub-compartment of the case, the opposed extremities of the case can be folded on score lines 13 and 14 to the position indicated in Figure 5 of the drawings. In this connection, the area of blank 11 between score line 13 and score line 17 defines a side wall 51 of the case while the area of blank 11 between score line 14 and score line 18 defines the other side wall 52 of the case when the blank is folded as shown in Figure 5.

In accordance with the present invention as exemplified in a carrying case for bottled goods, I conveniently form a series of apertures in blank 11 at the time of its manufacture to take care of the necks of the bottles carried. Since the case illustrated is designed for carrying six bottles, six apertures are formed in the blank, as shown. Three apertures 53, 54 and 55 are formed adjacent one extremity between score lines 16 and 17 and three apertures 56, 57 and 58 are formed adjacent the other extremity of the blank between score lines 18 and 19. It will be clear that with six bottles placed in sub-compartment 43 in alignment and in upright positions, the necks of the bottles will protrude through apertures 53 to 58 inclusive when the blank 11 is folded on score lines 17 and 18, as illustrated in Figure 6 of the drawings. Folding of the blank 11 on score lines 17 and 18 defines the top of the case consisting of two symmetrical halves 61 and 62.

It may be observed that with certain size of bottles or other type of containers, such as cans, the holes 53 to 58 might be dispensed with. Moreover, score lines 17 and 18 may be eliminated and the top 61, 62 form continuations of the sides 51, 52 and merely arched over the merchandise. The holes 53 to 58 inclusive largely are formed to conserve material of the blank, the flaps 21, 22 being made wider in certain cases to prevent displacement of the merchandise for, when folded, the flaps 21, 22 provide end walls 46, 47 which can be as high as desired.

The blank 11 is also apertured adjacent one longitudinal extremity, as at 63, in order to provide a space for passing the fingers of the hand to lift the case. A small flap 64 is formed in

blank 11 adjacent the other longitudinal extremity thereof by forming a short transverse score line 65 in the blank and slitting the blank in any desired manner, as at 66, to define the flap 64 which can be readily pushed out of the blank. Flap 64 is of such dimensions that it will readily pass through aperture 63 at the opposite longitudinal extremity of the blank and serves to interlock the opposed extremities when the blank is further folded along score lines 16 and 19. The area of blank 11 between score line 16 and the adjacent longitudinal extremity of the blank defines one portion 67 of the handle of the case while the area of the blank between score line 19 and the adjacent longitudinal extremity of the blank defines the remaining portion 68 of the handle of the case, the hand-hole 63 being cut from portion 67 of the handle and the cooperating interlocking flap 64 being formed from handle portion 68. Figure 6 of the drawings depicts the carrying case after the handle portions 67, 68 have been interlocked by passing flap 64 through hand-hole 63, after, of course, the blank has been folded on score lines 16 and 19.

In order that a plurality of cases can be stacked in tiers, I have also provided means in blank 11 for lowering a major portion of the top of the case. To this end, I provide two additional transverse score lines 71 and 72 in the blank 11, line 71 being formed between score lines 16 and 17 but closer to line 17 while line 72 is formed in the blank between score lines 18 and 19 but closer to line 18, all as particularly shown in Figure 1 of the drawings. Where no stacking of cases is required or desired, score lines 71 and 72 are not used as fold lines and the case is left in the condition shown in Figure 6 of the drawings. However, in the event that a number of cases are to be stored in tiers, it is only necessary to depress the top of the case by applying pressure to the handle portions 67, 68 to bend the top on fold lines 71, 72 to thus bring the top of the case to the position shown in full lines in Figure 8 of the drawings. In this position, the top of the handle is on a level with the tops of the bottles, shown in dot and dash lines, and a second case can readily be mounted on the lower case. The dotted line showings of Figure 8 of the drawings illustrate the position of the top and handle portions of the case when restored to their normal positions.

Figures 1 to 5, inclusive, and Figures 6 and 8 of the drawings show the development of the carrying case exemplification of my invention from its manufacture through various stages of folding and packing to its condition as delivered to the ultimate consumer or purchaser. Particular attention is directed to the showing of Figures 1 and 2 wherein I have depicted, respectively, the blanked out case as stamped out of sheet material and, in Figure 2, the blank as folded on the main fold line 12 and with the flaps 21 and 22 fastened together. The blanked out case, as depicted in Figure 2 of the drawings, is the form in which it is delivered to the trade, either wholesale or retail, for packing with contents. However, as pointed out above, the blank 11 may be delivered with the flaps 21, 22 unfastened and they can be connected later by the user, prior to unfolding so that the sub-compartment 43 will automatically be set up when unfolded. This improved method of manufacture of a carrying case reduces the time for packing to a minimum since the sub-compartment 43 is automatically formed in the single operation of

unfolding the blank along longitudinal, medial line 12, the main fold line of the case. The remaining operations of forming the sides and top of the case, together with the handle and interlocking means thereof, is standard practice.

A cake or pie box exemplification of my invention is depicted in Figures 9 to 12, inclusive, of the drawings, this box embodying the fundamental or basic improvement of the main fold line extending medially of a blank throughout its length. As illustrated particularly in Figure 9 of the drawings, I provide a blank 111, fabricated preferably of cardboard, in which I form a longitudinal, medial score line 112 which is the main fold line of the box. As with the blank for carrying case exemplified, I form two transverse score lines 113 and 114 in blank 111 to define an area 115 which constitutes the bottom of the box when folded. In the cake or pie box exemplification, I also provide two additional transversely disposed score lines 116 and 118 on opposite sides of score lines 113 and 114 to define areas 117 and 119, respectively, in the blank which form the side walls of the box as herein-after described.

In accordance with the invention, blank 111 is so formed as to provide thereon a pair of opposed flaps 121 and 122 extending from opposite lateral extremities 123 and 124, respectively, of the blank and also slit the blank at the juncture of the body and the flaps, as at 126, 127, 128 and 129. Moreover, I provide score lines 131 and 132 in the blank 111 at the juncture of the flaps and the main body of the blank between transverse score lines 113 and 114, thus defining fold lines for the flaps. In addition, each flap is provided with transverse score lines forming extensions of the score lines 113 and 114. As particularly illustrated in Figure 9 of the drawings, flap 121 is provided with two spaced score lines 133 and 134 while flap 122 is provided with two spaced score lines 136 and 137.

The pie or cake box exemplification of my invention preferably is provided with similar means as the carrying case exemplification for fastening the lateral extending flaps 121 and 122 together. Thus, flap 121 is so formed as to provide tongues 138 and 139 thereon adjacent opposite lateral extremities, each tongue having an enlarged head 140 thereon. Flap 122 is formed with a pair of slots 141 and 142 therein adjacent opposed extremities of the flap for cooperating with the tongues 138 and 139 of flap 121 to afford sliding joints therebetween. After folding blank 111 on main fold line 112 to bring flaps 121 and 122 into registry, the heads 140 of tongues 138 and 139 on flap 121 are passed through slots 141 and 142 of flap 122 to interlock the flaps together. With these flaps so fastened, unfolding of the blank will automatically form a sub-compartment 143, as clearly depicted in Figure 11 of the drawings, the edges 144 of the heads 140 of the tongues bearing against the ends 145 of the slots 141 and 142 of flap 122 to lift up the flaps as well as bend or fold the same on score lines 133, 134, 136 and 137 and thus define the sub-compartment 143 having end walls 146 and 147 and side walls 148, 149.

As mentioned above, the area of blank 111 between score lines 113 and 116 adjacent one side of the bottom 115 of the box defines a side wall 151 of the completed box while the area of blank 111 between score lines 114 and 118 defines the other side wall 152 of the box when the same is folded on score lines 116 and 118, these side walls

151 and 152, together with the sides 148, 149 of the sub-compartment 143 affording a double thickness to enhance the strength of the box, see particularly Figures 11 and 12 of the drawings. In addition to side flaps 121 and 122 on blank 111, I also form the blank with side extensions 153 and 154 which project obliquely from score line 116 to approximately the same width as the widths of the flaps 121 and 122, and then extend in straight lines to the end of the blank, as indicated by reference numeral 155. In order that these extensions 153, 154 may be folded, I form score lines 156 and 157 at the junctures of the extensions 153, 154, respectively, and the main body of the blank. Moreover, I also provide relatively small ears 158 and 159 on the extensions 153 and 154, respectively, for tucking the extensions into the completed box, although these ears may be eliminated, if desired. Score lines 160 are formed in the extensions 153, 154 to enable folding of the ears at right angles to the extensions. If desired, the blank 111 can be so stamped as to form extensions 153' of the shape illustrated in Figure 13 of the drawings, this modified form of extension being desirable in certain types of boxes. The ears 158, 159 are not needed if the modified type of extensions 153', 154' are employed. The area 161 defined by the score line 116 and the adjacent longitudinal extremity of blank 111 constitutes the top of the box, the top having a tab 162 thereon which is formed at the time of stamping out blank 111. Tab 162 cooperates with a slit 163 formed in the blank along score line 118 to fasten the top in position, the top being additionally secured by tucking ears 158 and 159 of extensions 153, 154 in between the side wall 149 of sub-compartment 143 and side wall 152 of the box when completing the folding of the box. It is to be noted that the area 164 defined by the score line 118 and the adjacent longitudinal extremity of the blank 111 constitutes an extension of side wall 152 of the box, this short extension partially overlying sub-compartment 143 and partially underlying the top 161 when the blank is folded on score line 118. It also is to be observed that extensions 153, 154 are slightly rounded or enlarged adjacent fold line 116, as at 165, in order that the box be strengthened at these points on opposite ends of the box, the extensions 153, 154 constituting the end walls of the completed box, when folded, and affording, together with the end walls 146, 147 of the sub-compartment 143, a double thickness at such ends.

The exemplification of my invention shown in Figures 9 to 13, inclusive, can include a top 161 having a hole or aperture 160 therein for receiving display means for advertising the included merchandise or can receive a vase, can or other container carrying any desired article, goods or material, as desired.

As in the case of the carrying case for bottled goods illustrated in Figures 1 to 8 of the drawings, the method of manufacturing the pie or cake box exemplification of my invention is first to stamp out the blank in the manner shown in Figure 9 of the drawings after which the blank 111 is folded on the main fold line 112 which extends longitudinally and medially of the blank, the two flaps 121 and 122 being fastened together while the blank is in the folded condition, as clearly depicted in Figure 10 of the drawings. The thus folded and connected blank is in condition for packing with a cake, pie or similar

article, as it is only necessary for an operator or user of the box to unfold the blank whereby sub-compartment 143 is automatically formed or set up for receiving the goods. It may be observed here that an alternative method of automatically forming the sub-compartment 143 is to manually fold the blank 111 on a longitudinal medial line thereof and manually or otherwise fasten the flaps 121 and 122 together, and then unfold the blank to set up the sub-compartment. It is then only necessary to fold the box together by bringing side 152 into position and then folding top 161 into position, tucking tab 162 into slit 163, and tucking ears 158 and 159 in between the side 152 and the side wall 149 of the sub-compartment 143. If a blank 111 be used wherein a modified extension 153' is provided, see Figure 13, no ears need be formed thereon.

It is to be understood that the appended claim is to be accorded a range of equivalents commensurate in scope with the advance made over the prior art.

I claim:

A blank for forming a box comprising a continuous sheet of material having a rectangular base panel and provided with a longitudinal medial score line, a relatively narrow panel on each side of said base panel with the junctures therebetween defined by score lines upon which each

narrow panel may be pivoted with respect to said base panel; each of said narrow panels being provided with score lines whereby they may be folded and each having one diagonal edge adjacent one extremity thereof, means on said narrow panels for effecting an interlock therebetween when said blank is folded and said narrow panels are in registry, unfolding of said blank on said longitudinal medial score line automatically setting up a rectangular compartment of which said narrow panels form the upstanding walls, a narrow extension on said blank on opposite sides of said base panel with the junctures therebetween defined by score lines whereby said extensions may be folded into engagement with the upstanding walls of said compartment to provide a reinforcing outer wall on both sides thereof, a relatively large extension on one of said narrow extensions and forming the top of the box when folded over said compartment, a relatively narrow flap on each side of said large extension; said flaps each having a diagonal edge contiguous to the diagonal edge of an adjacent narrow panel, a tab on said large extension, and a narrow flap on the opposite side of said blank from said large extension; said narrow flap having a slit therein for receiving said tab to close the box.

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