June 27, 1961 G. V. THOMPSON 2,990,097

BOX ASSEMBLY

Filed Feb. 6, 1958 3 Sheets-Sheet 1

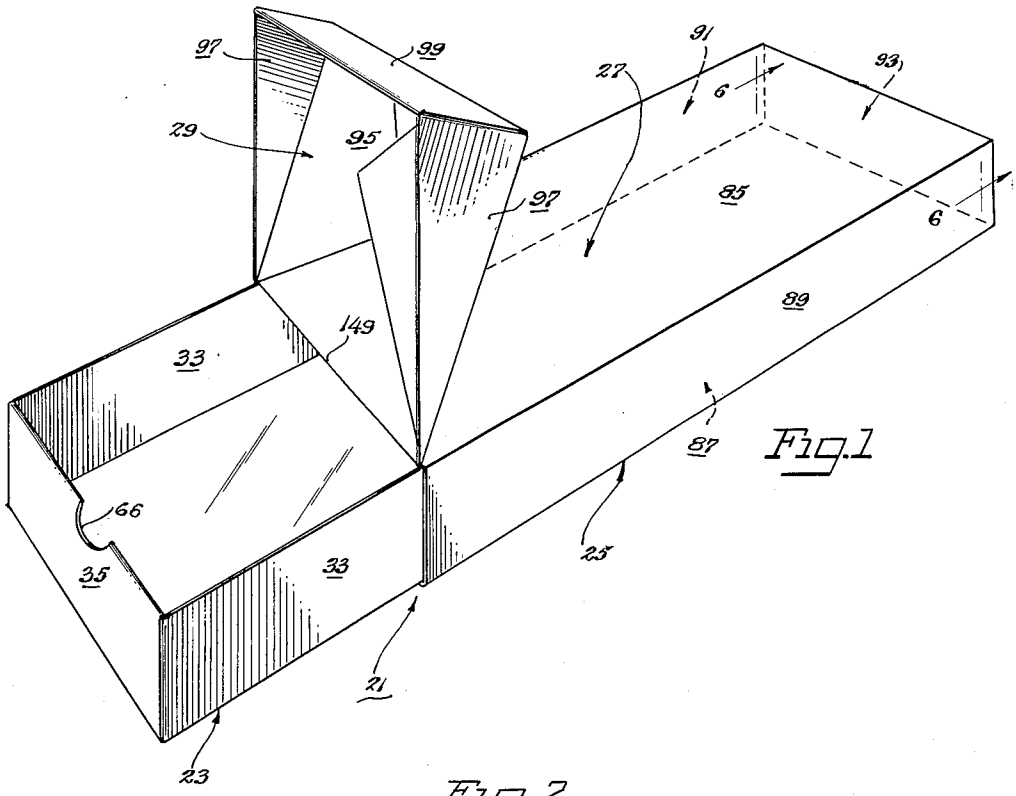
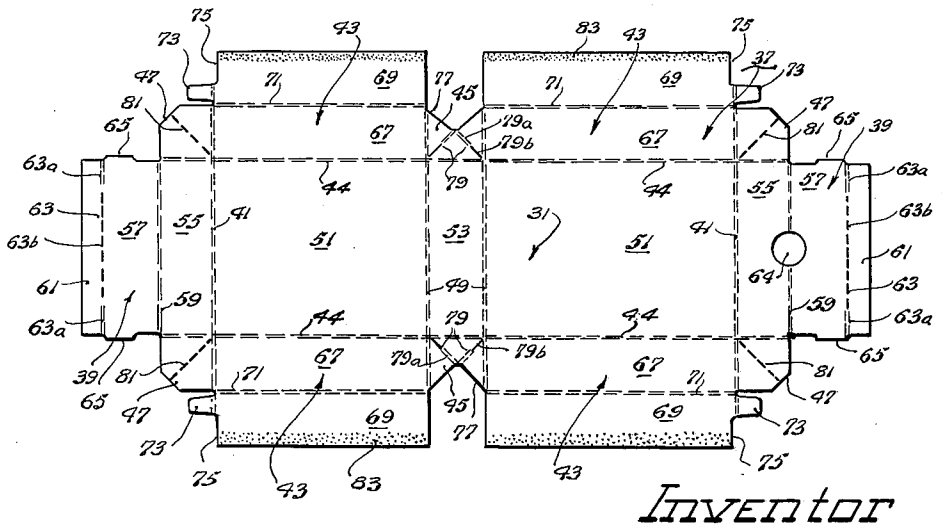


Fig. 1

Fig. 2



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BOX ASSEMBLY

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Fig. 3

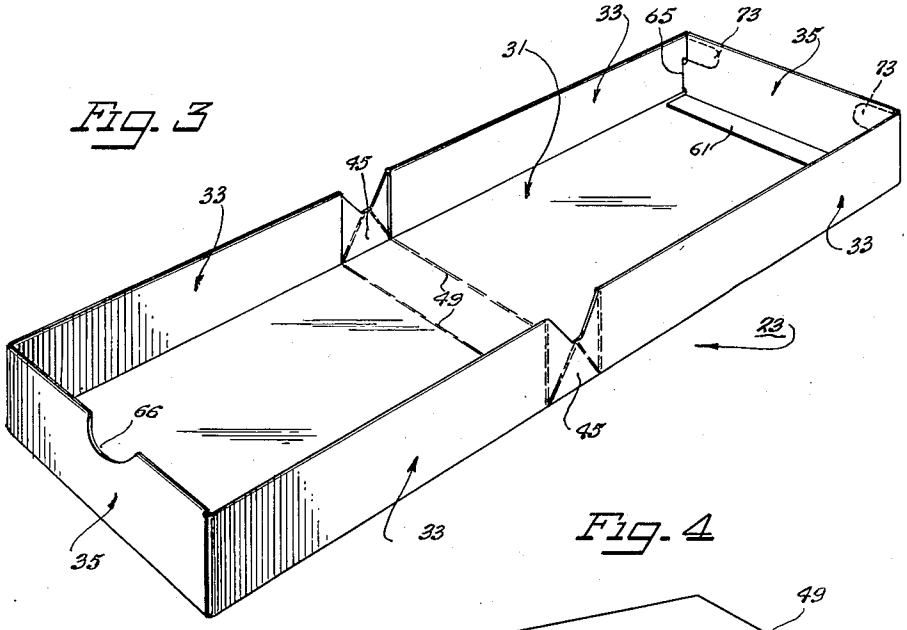
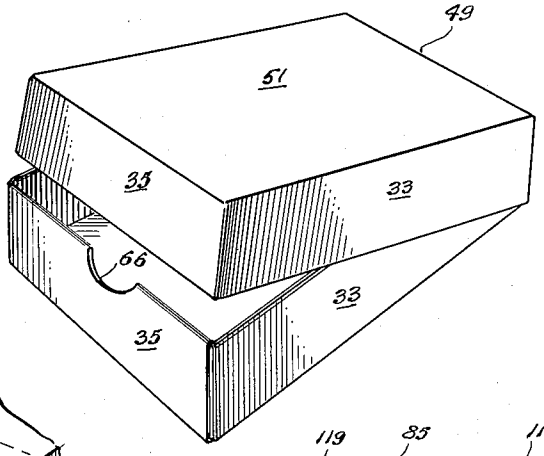


Fig. 4



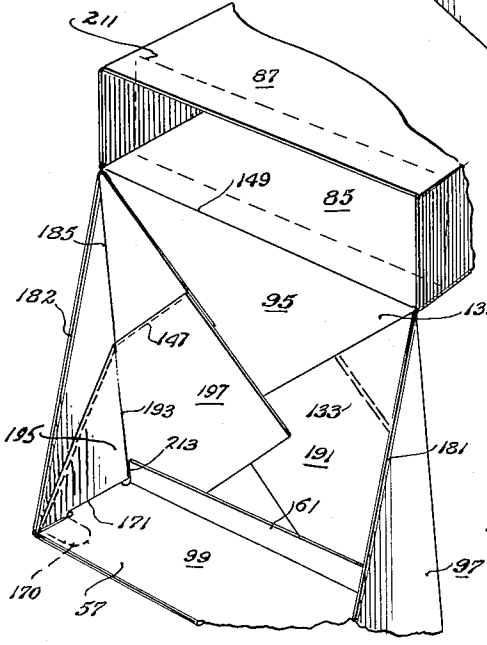


Fig. 5

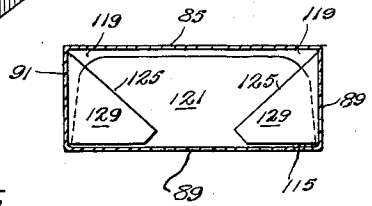


Fig. 6

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BOX ASSEMBLY

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Fig. 7

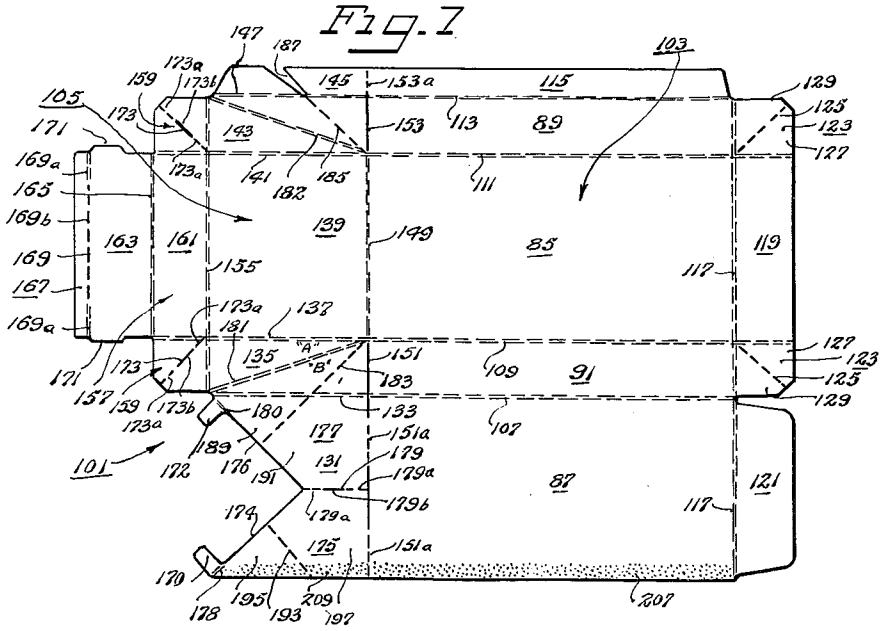


Fig 8

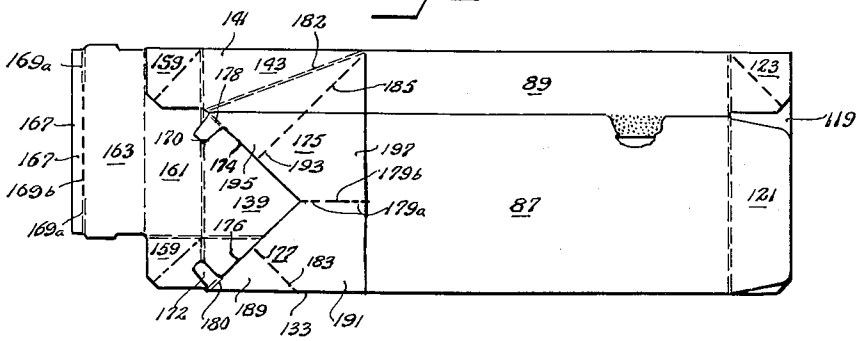
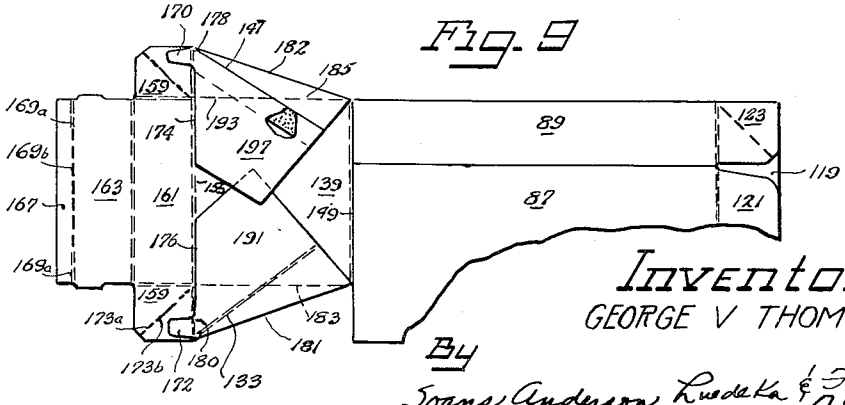


Fig. 9



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2,990,097

BOX ASSEMBLY

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Filed Feb. 6, 1958, Ser. No. 713,582
5 Claims. (Cl. 229—20)

The present invention relates generally to box assemblies and more particularly to a paperboard box assembly which includes an outer carton and an inner container.

In the retail soft goods merchandising field, as well as in other fields, it is often desirable and sometimes necessary because of variations in size, color, and/or design to maintain a relatively large inventory for sale of certain goods, such as for instance, gloves, shoes, girdles, stockings, etc. The stock is often carried in boxes which are placed one upon the other in a series of vertical stacks, in some predetermined order to assist in the rapid location of a desired item. In the past, when a sample article was desired for display or inspection by a customer in connection with a possible sale, the salesman would first locate the article desired and would then remove the box containing the article from the stack. The box and the article contained inside would then be brought to the customer for display and inspection. After the customer had inspected the article, and the article remained unsold, it would then be returned within the box to the stacks. A good deal of work was entailed in replacing these returned boxes in the proper sequence in order to assist in promptly relocating them at some future time.

If the article was sold, it might be presented to the customer to take with him in the box removed from the stack, thereby leaving a void in the stack, or it might be repackaged. In the case of repackaging, the original box might be discarded, which would also cause a void in the stack, or it might be returned empty to the stack to be replaced or refilled at a later date. In either case, the stock situation in the stacks becomes confusing. In one situation, if there is a void, the salesman must search to determine the nature of the missing item and whether that particular item is sold or misplaced. In the other situation, the presence of empty boxes in an inventory stack can be very misleading and tends to present a false picture of a full stock bank which may actually be missing many items.

The box assembly of the present invention has been developed with the above difficulties in mind and, consequently, has particular merchandising features which are directed to the reduction of the work involved in the returning of unsold goods to the proper storage location, to the packaging of goods sold, and at the same time to the reduction and elimination of confusion with respect to the status of the goods held in inventory.

Accordingly, the principal object of the present invention is the provision of a new and improved box assembly which includes an inner container adapted to be slidably received and enclosed within an outer container having novel means for gaining access to the inner container.

A further principal object of the present invention is the provision of a new and improved outer container construction which is adapted for use with a co-operating inner container and which includes a novel opening means for gaining access to the inner container.

Another object of the present invention is the provision of an outer carton of the type described, which may be erected from a single paperboard blank, which can be readily and economically manufactured from available materials on ordinary carton-making machinery, and which includes a lid of novel and special construction to provide for greater utility, increased strength and resulting long life.

A further object of the present invention is the provision of a novel paperboard box assembly of the type described, which includes an inner open top tray which is adaptable, when removed from the outer carton, to form a separate enclosure or carton.

Other objects and advantages of the present invention will become known by reference to the following description and accompanying drawings of one embodiment of the invention.

In the drawings:

FIGURE 1 is a perspective view illustrating a box assembly, including an outer carton and an inner tray, which embodies various of the features of the present invention.

FIGURE 2 is a reduced plan view of a paperboard blank from which the tray shown in FIGURE 1 is assembled.

FIGURE 3 is an enlarged perspective view of the tray erected from the blank shown in FIGURE 2.

FIGURE 4 is a perspective view illustrating the manner is which the tray shown in FIGURE 3 may be employed to form a closed container.

FIGURE 5 is a fragmentary perspective view of the illustrated outer carton shown in FIGURE 1, in inverted position, to particularly illustrate the structural formation of the lid of the carton.

FIGURE 6 is a reduced cross-sectional view taken along line 6—6 of FIGURE 1.

FIGURE 7 is a reduced plan view illustrating the paperboard blank from which the outer carton shown in FIGURE 1 may be erected.

FIGURE 8 is a plan view illustrating a subsequent formation of the carton blank shown in FIGURE 7.

FIGURE 9 is a partially broken away plan view illustrating a further step in the formation of the carton blank shown in FIGURE 7.

Illustrated generally in FIGURE 1 is one selected embodiment of a carton or box assembly **21** which embodies various of the features of the present invention, and which is of elongated rectangular shape to make it especially adapted for use in the merchandising of girdles. Although it is anticipated that other materials might be used in the making of the box assembly **21**, the preferred embodiment comprises, and the following description is directed to, a paperboard box assembly. As will be seen, the box assembly **21** comprises an outer container or carton **25** and an inner container or tray **23**. The outer carton **25** includes a sleeve section **27**, adapted to slidably receive one end of the inner tray **23**, and a lid section **29** which is hingedly and integrally connected in extending relation to one end of the sleeve section **27** and which is adapted, when in the raised or open position, to allow the inner tray **23** to be freely inserted or removed from within the sleeve section **27**. When in the closed position, the lid **23** is adapted to cover the extending end of the tray **23** and to substantially enclose the tray **23** within the outer carton **25**. By means of this type of construction, the outer carton **25** is advantageously adapted to receive the inner tray **23**, including the goods therein, as well as to permit easy removal of the inner tray from the outer carton **25**, all without disturbing the prearranged order of a number of box assemblies making up a stack.

Another merchandising advantage is provided by the formation of the outer carton **25** and the inner tray **23**, wherein the disposition and arrangement of the lid **29** allows inspection of the contents of the box assembly **21**, while in a stack, without disturbing the order of the stack or requiring the removal of the inner tray **23**.

A further advantageous merchandising feature of the selected embodiment of the box assembly **21** is achieved

by adapting the inner tray 23, when removed from the outer carton 25, to form a complete, closed carrying container in which goods may be packaged and carried from the store.

The box assembly 21 and therefore the outer and inner containers may take various forms and sizes depending upon the shape and type of the article to be contained. In this embodiment, the selected inner container or tray 23, illustrated generally in FIGURE 3, is of generally rectangular cross section and is of open-top formation when enclosed in the outer carton 25 to allow the contents therein to be easily viewed, as will be explained. While other types of tray construction may also be advantageously employed in the box assembly, the selected tray 23 is erected from a single paperboard blank and has a bottom wall panel 31 and side and end walls 33 and 35, respectively, of double thickness to provide extra strength. In order to provide a package which may be readily employed to carry a purchased article from the store, the inner tray 23 is adapted, when removed from the outer carton, to be folded upon itself and telescoped, as shown in FIGURE 4, to form a closed carton. Although other means might have been employed, in this instance, in order to accommodate the folding of the tray into a closed carton, the bottom wall panel 31 of the tray 23 is transversely scored at intermediate positions therealong to provide a pair of spaced, parallel fold or hinge lines 49, and the side walls 33 have also been suitably scored or creased to provide gussets 45 intermediate extensions of the hinge lines 49. The side wall gussets 45 also strengthen the construction of the tray 23, especially in the extended position, by providing for continuity of the sidewalls.

The open tray 23 is erected from a blank 37, shown in FIGURE 2. The blank 37 is generally of rectangular shape and includes the bottom wall panel 31, a pair of end wall panels 39 which extend integrally through score lines 41 defining the ends of the bottom of the tray, four side wall panels 43 which extend integrally through score lines 44 defining the sides of the tray bottom, the side gussets 45 located centrally of the side wall panels 43, and four corner gussets 47.

The bottom wall panel 31 includes the pair of parallel spaced apart score lines 49 which divide the bottom wall panel into two end portions 51 of substantially the same size, and a central portion 53 included between the score lines 49. As can be seen in FIGURE 4, when the tray 23 is telescoped, the end portions 51 form the top and bottom walls, and the central portion 53 forms one of the end walls.

Each of the end wall panels 39, from which the reinforced end walls 35 are formed, includes an outer end wall panel 55 foldably connected through a score line 59 to an inner end wall panel 57, and a bottom wall reinforcing strip 61 foldably connected to the panel 57 through a suitable fold line 63 having outer scored portions 63*a* and an intermediate perforated portion 63*b*.

One of the end wall panels 39 is formed with an opening or hole 64 which is adapted to form, when the tray is erected, a notch 66 by which the inner tray 23 may be readily grasped when removing the tray 23 from the outer carton 25. The opening 64 is preferably located in a symmetrical relation to the score line 59, and in this selected embodiment, is of circular shape to provide a semi-circular end wall notch 66.

The reinforced side walls 33 of the tray 23 are formed from the side wall panels 43 which extend from the sides of the bottom portions 51 and which include an outer side wall panel 67 foldably connected through a score line 71 to an inner side wall panel 69. Each of the inner side wall panels 69, shown in FIGURE 2, also has an integrally extending tab 73, which interacts with the end walls 35 to strengthen the tray 23, and an indented portion 75 which co-operates with one of the locking tabs 65 in maintaining the end walls 35 in proper erect condition.

Each of the centrally located side gussets 45 extends integrally and foldably from the bottom wall along an extension of the score line 49 and is also integrally and foldably connected to each of the adjacent outer side wall panels 67 through extensions of the score lines 49. The outer edge 77 of each of the side gussets is generally in the shape of an inwardly directed V formation. Each of the gussets 45 also includes a pair of fold lines 79, each of which extends generally from the apex of the V to one of the inward gusset corners. In this embodiment, each of the fold lines 79 has a scored line portion 79*a* which extends of the apex to the V and has a cut portion 79*b* which extends, as shown, to the respective inward corners of the side gussets.

Each of the corner gussets 47 extends integrally from one end of the adjacent outer side wall panel 67 through an extension of the score lines 41, and extends integrally from an adjacent outer end wall panel 55 through an extension of the score lines 44. Each of the corner gussets 47 is further provided with a scored or perforated line 81 which extends diagonally of the gussets 47 in the customary fashion.

Erection of the open tray 23 to the form shown in FIGURE 3 may be accomplished on ordinary carton forming equipment. In this connection, glue or other adhesive is first applied to the outer marginal areas, indicated by the numeral 83 in FIGURE 2, of each of the inner side wall panels 69. The inner side wall panels 69 are then inwardly folded along the line 71 and secured in overlying relation to the adjacent outer side wall panels 67. The double-ply side walls 33 thusly formed are then formed into upstanding relation to the bottom wall panel 31.

Each of the end walls 35 is then formed by inwardly folding each of the adjoining corner gussets 47 and by simultaneously folding the end panel 39 into upstanding relation to the bottom panel 31. The inner end wall panel 57 is then folded along the line 59 into overlying relation with each of the adjacent inwardly folded adjoining gussets 47, the extension tabs 73 of the adjacent inner side wall panels 69, and the associated outer end wall panel 55. At the same time, the bottom wall reinforcing strip 61 is folded into overlying relation with the marginal end regions of the bottom wall panel 31 to reinforce the end edge portions of the bottom wall panel 31. Each of the locking tabs 65 of the inner end wall panels 57 is engaged with the indented portion 75 of the adjacent inner side wall panel 69, as has been cited, to maintain the end wall 35 in proper upstanding position and to thereby maintain the tray in erected condition.

One of the advantageous features provided by the described tray construction is that, when the open tray is removed from the outer carton, the tray is foldable upon itself and completely closable to form an article carrying container. In this connection, it will be noted, as seen in FIGURE 4, that the bottom wall panel 31 is folded along each of the transverse scores 49, and that the centrally located side gussets 45 are simultaneously folded inwardly against the panel 53 when converting the tray 23 to a closed carton.

An outer carton 25, which is adapted to receive the inner container or tray 23 and to provide therewith various of the features set forth in this application, is designed and proportioned to slidably receive and to substantially enclose the inner tray 23, previously described, and is, therefore, of generally rectangular shape.

In the selected embodiment to be described, the outer carton 25 is fabricated from a unitary paperboard blank, although other materials and other methods of formation may be used to gain certain of the advantages of the invention described herein.

The selected outer carton 25, as has been noted, includes a sleeve section 27 and a lid section 29 which is integrally connected to one end of the sleeve section 27. As can be readily seen in FIGURE 1, the tubular sleeve

section includes a top wall 85, a bottom wall 87, and a pair of side walls 89 and 91, which, in this embodiment, are all of equal length. The end of the sleeve section 27 opposed to the extending lid section 29 is closed by a reinforced end wall 93 which also serves to maintain the tubular sleeve in rectangular cross section.

The lid section 29 is integrally and hingedly connected to the top wall 85 of the sleeve section 27 and, in this embodiment, is of novel reinforced construction which is adapted to provide extra strength and resultant longer life. This special multi-ply construction includes a top wall 95, a pair of opposed triangular side walls 97, and an end wall 99.

The outer carton 25 is erected from a blank 101, shown in FIGURE 7, of generally rectangular form which is especially designed to afford economical fabrication of the outer carton. The blank 101 may be thought of as being divided into two integrally connected parts, one part 103 being adapted to form the sleeve section 27 and a second part 105 being adapted to form the lid section 29.

The first or sleeve part 103 includes a series of generally rectangular panels from which the walls of the sleeve section 27 are formed. In this connection, the bottom wall panel 87 is connected through a score line 107 to the side wall panel 91, which in turn is connected through a score line 109 to the top wall panel 85. Integrally connected to the top wall 85 through a score line 111 is the side wall 89, which in turn is connected through a score line 113 to an attachment flap 115.

Integrally connected to the outer end of the sleeve part 103 through a fold line 117 is a series of panels adapted to form the end wall 93 of the sleeve section 27. These panels include an end wall panel 119, which extends from the top wall 85, a tuck panel or tab 121 which extends from the bottom wall 87, and a pair of gussets 123 one of which extends from each of the side wall panels 89 and 91. Each of the gussets 123 is also foldably and integrally connected through an extension of one of the respective score lines 111 and 109 to the adjacent side of the end wall panel 119. A scored or perforated line 125 extends diagonally across each of the gussets 123 from the respectively adjacent corners of the top panel 85 and divides the gussets into two parts 127 and 129.

The second or lid part 105 of the blank 101 is also comprised of a series of panels which are integrally formed with the panels of the sleeve part 103 and which include a lid reinforcing panel 131 connected through a score line 133 to a first lid side panel 135. Integrally connected to the side panel 135 through a score line 137 is a lid top panel 139, which in turn is connected through a score line 141 to a second lid side panel 143, which is also connected in turn to an attachment flap 145 through a score line 147. The score lines 133, 137, 141 and 147 of the lid part 105 are substantially in alignment with the score lines 107, 109, 111 and 113 of the sleeve part 103.

The lid part 105 and the sleeve part 103 of the blank 101 are joined through a score line 149 which integrally and hingedly connects the sleeve top wall 85 and the lid top panel 139, and are also joined, when in the blank form, through a pair of cut lines 151 and 153 which are in alignment with and extend from the ends of the score line 149, and which have interrupted cut portions 151*a* and 153*a* respectively. As shown, the interrupted cut portions 151*a* connect the sleeve bottom wall 87 to the lid panel 131, while the interrupted cut portion 153*a* connects the sleeve attachment flap 115 to the lid attachment flap 145.

Integrally connected through a score line 155 to the outer end of the lid part 105 is a series of panels from which are formed the lid end wall 99 and which include an end wall panel 157 extending from the lid top panel 139, and a pair of gussets 159, one of which extends from each of the lid side panels 135 and 143. The lid end wall panel 157 and the gussets 159 are formed in a similar

fashion to the end wall panels 39 and corner gussets 47 of the inner tray 23. Consequently, the end wall panel 157 includes an outer wall 161, an inner wall 163 which is foldably and integrally connected to the outer wall 161 through a score line 165, and a lid top panel reinforcing strip 167 integrally connected to the inner end wall panel 163 through a suitable fold line 169. In this instance, the fold line 169 has outer scored portions 169*a* and an intermediate perforated cut portion 169*b*. The inner end wall panel also includes a pair of locking tabs 171. Each of the gussets 159 is provided with a suitable diagonal fold line 173. In this embodiment, the fold line 173 includes outer perforated cut portions 173*a* and an intermediate cut portion 173*b*.

The previously mentioned panel 131 of the lid part 105 is cut away at its outer end in an inwardly directed V formation, having side edges 174 and 176. The panel 131 is also divided into two symmetrical but opposed smaller panels 175 and 177 by a suitable cut line 179 which extends from the apex of the V parallel to the score line 133 for the remaining length of the panel 131, and which is adapted to be later severed as will be explained. In this embodiment, the cut line 179 includes end perforated portions 179*a* and an intermediate cut portion 179*b*. In order to provide greater strength in the erected lid, the panels 175 and 177 are each provided with a suitably shaped extension tab 170 and 172, respectively. The tabs 170 and 172 are foldably connected to the respective panels 175 and 177 through fold lines 178 and 180, and extend outwardly, as illustrated, adjacent the outer ends of the respective sides 174 and 176 in a generally perpendicular relation thereto.

The angle included between the sides 174 and 176, and the depth of the V formation, are selected so that in the later partially erected form of the lid, as illustrated in FIGURE 9, the sides 174 and 176 are generally parallel to and spaced slightly inward of the fold line 155 in order to provide for engagement of the locking tabs 171 when in the completely erected condition, and to provide for suitable clearance from the end wall 99 should some misalignment occur during the manufacturing process.

A number of other score lines and perforated lines are included in the construction. Included among these lines are a pair of score lines 181 and 182 which run diagonally across the respective lid side panels 135 and 143 from the respective side panel corner adjacent the sleeve top wall 85.

Perforated cut lines 183 and 185 also extend from the respective corners adjacent the sleeve top wall 85 of each of the lid side panels 135 and 143. In order to properly form the lid section 29, the angle "A" included between score lines 137 and 181 should be equal to the angle "B" included between the score line 181 and the perforated cut line 183. A similar relation exists between the angles formed by lines 141, 182 and 185. The score line 185 extends across the side panel 143 to the score line 147, where it joins a notch 187 in the attachment flap 145 provided to allow clearance when the lid section 29 is erected. In the case of the score line 183, it extends across the side panel 135 and beyond the score line 133 to the edge of the panel 177, dividing the panel 177 into portions 189 and 191.

A perforated cut line 193 extends across the panel 175 in a symmetrical manner to that of the segment of the perforated cut line 183 included in the panel 177, and divides the panel 175 into portions 195 and 197.

Erection of the outer carton from the disclosed blank may also be readily accomplished on ordinary carton-forming machinery. In this connection, glue or other adhesive is applied along longitudinal side marginal areas 207 and 209 of the sleeve bottom wall 87 and the lid panel 175 respectively as shown in FIGURE 7. The perforated cut portions 151*a* and 153*a* are then severed to disconnect the sleeve wall 87 from the lid panel 131 and to disconnect the sleeve flap 115 from the lid flap 145.

The sleeve side wall 89 and the associated attachment

flap 115 and gusset 123 are then folded along the score line 111 into overlying relation to the adjacent areas of the sleeve part 103 as shown in FIGURE 8. At the same time, the lid side panel 143 and the associated attachment flap 145 and gusset 159 are folded along the score line 141 into overlying relation with adjacent regions of the lid part 105. The sleeve bottom wall 87 is then folded along the score line 107 and the lid panel 131 is similarly folded along the score line 133 so that the outer glued areas 207 and 209, respectively, come into contact with and are bonded to the attachment flaps 115 and 145, respectively.

In the next operation, the panels 171 and 175 are separated from one another by severing the perforated cut line 179. When this occurs, it will be noted that the lid part 105 is now generally symmetrical in shape about the lid top panel 139. The lid side panel 135 and panel 177 are then unfolded along the score line 133 but are subsequently refolded along the score line 181, so that the portion 191 of the panel 177 is in general overlying relation within the lid top panel 139, as shown in FIGURE 9. Similar operations are performed on the side panel 143 and the attached panel 175 to place them in a similar formation to that just explained, and as illustrated in FIGURE 9. It should be noted that in this condition, the perforated cut line 183 overlies the score line 137 of the panel 135, and the perforated cut lines 185 and 193 overlie the score line 141 of the panel 143.

The sleeve and lid sections 27 and 29 of the outer carton 25 may now be erected from the respective parts 103 and 105 of the blank 101.

Erection of the lid section will first be described, although the sleeve section may be first erected or the sections may be erected simultaneously. The multi-ply lid side walls 97 are first formed into upstanding position with relation to the lid top panel 139 by folding along the score lines 137 and 141. The end wall panel 157 is also folded into upstanding relation to the top panel 139 by folding along the score line 155, and at the same time, the gussets 159 are folded inwardly into adjacent relation to the upstanding outer end wall panel 161 and into adjacent relation with the extension tabs 170 and 172 which have been inwardly folded along the score lines 178 and 180 in cooperation with the folding of the gussets 159. Finally, the inner reinforcing end wall panel 163 is folded along the score line 165 to overlie the extension tabs 170 and 172, the gussets 159, and the outer end wall panel 161. The locking tabs 171 are engaged with the respective edges 174 and 176 in order to maintain the lid section in the erected condition, and the top wall reinforcing strip 167 is overlayed upon the adjacent edge portion of the lid top wall panel 139 and the extending portions of the panels 191 and 197, as best seen in FIGURE 5. The strip 167 not only serves to reinforce the edge portion of the top panel 139 but also serves to maintain the plies of the side walls 97 in intimate relation by abutting against the edge of the portions 189 and 195, as indicated by the numeral 213 in FIGURE 5. Furthermore, the strip 167 serves to hold the portions 191 and 197 in proper adjacent position to the top wall panel 139.

By reference to FIGURE 5, it will clearly be seen that the lid is of especially strong and sturdy construction. The end and side walls 99 and 97 are each of double ply construction, and a substantial portion of the top wall is also of multi-ply construction to withstand wear and tear during a long and useful life.

The sleeve section of the carton is set up in tubular form and the end wall 93 is constructed by lifting the side walls 89 and 91 upward and by simultaneously inwardly folding the gussets 123 and inserting the tuck 121 between the end wall panel 119 and the adjacent portions 127 of the inwardly folding gussets 123. An end wall formed in this fashion is not only of double thickness and quite sturdy, but will maintain the tubular sleeve section in rectangular cross section.

Because this selected embodiment of an outer carton 25 was designed for use with the prior described tray 23, the cross section across the tubular sleeve section as shown by the dotted line 211 in FIGURE 5, is slightly larger than the similar cross section of the tray 23. Similarly, the total length of the sleeve and lid sections 27 and 29 is slightly larger than the length of the tray 23. In this instance, the length of the sleeve section 27 is approximately twice the length of the lid section 29 and therefore serves to effectively support the tray section even when the tray is partially withdrawn. However, this proportion may be widely varied to suit the occasion.

When the disclosed box assembly is used for storage of goods within a vertical stack of boxes, it is readily apparent, that by pulling the box forward a sufficient distance to expose the fold line 149, the lid section 29 of the outer carton 25, may be upwardly lifted to clear the extending portion of the tray 23. In this position, the contents of the open top tray 23, may be easily inspected or the tray may be grasped and pulled forwardly until the tray and goods contained therein are completely removed from the outer carton. It will be noted that the outer carton 25 is retained within the stack, and that the prearranged sequence within the stack has not been disturbed.

When the tray 23 is removed from the sleeve 25, it is sometimes desirable to return the carton to a position in upstanding alignment with the other boxes in the stack. This is especially true if the carton is of lightweight construction and the contents of each of the boxes is relatively heavy. When the outer carton 25 is returned in upstanding alignment with the other boxes, the end wall 99 of the lid section 29 assists in supporting the weight of the boxes higher in the stack and helps prevent crushing of the tubular sleeve section 27.

However, it may also be found desirable in certain situations to employ the lid section of the outer carton as a flap or marker to focus attention to those boxes which are empty. In this connection, the emptied outer carton may be left outwardly extending from the stack of boxes, in which case, the lid section will hang downwardly and forwardly, plainly indicating the empty boxes.

If the goods are to be returned, the lid is first lifted to expose the open end of the tubular sleeve section 27 and the tray 23 inserted therein. When the tray 23 is fully telescoped within the sleeve 27, the lid section 29 may be downwardly positioned to cover the tray and to enclose it within the outer carton. The box assembly 21 may then be pushed back into upstanding alignment with the other boxes in the stack.

The disclosed re-inforced construction of the box assembly provides for an especially long and useful life. While the box assembly has been described in terms of usefulness with regard to certain merchandising features, it should be understood that the box is capable of use in many other ways other than that indicated above. Furthermore, the special construction of the outer carton and the particularly strong lid construction makes the outer carton adaptable for use with other inner containers and in other circumstances than that described herein. For example, the outer carton may be used, in the inverted position shown in FIGURE 5 if desired, as a container or receptacle without an inner tray such as is described in the assembly.

Other additional changes and modifications might be made in the disclosed construction to gain certain of the advantages mentioned herein without departing from the principles of the present invention.

I claim:

1. A paperboard box assembly comprising an outer carton and an inner tray slidably positionable in said outer carton, said tray being formed from a single blank, being of generally rectangular cross section having an open

top, and including a bottom wall and a pair of each of opposed multiply side and end walls, said bottom wall including a pair of spaced apart parallel transverse fold lines, and each of said side walls of said inner tray having a centrally located gusset whereby when said inner tray is removed from said outer carton one end of said tray may be folded and telescoped over the other end of said tray to form a closed container, said outer carton being formed from a single blank and comprising a sleeve section and a lid section, said sleeve section being of generally rectangular cross section, being closed by a multiply end wall at one end, and having top, bottom, and side walls of equal length proportioned to slidably receive a part of said inner tray with the remainder thereof extending outwardly from said sleeve section, said sleeve end wall being formed by an end wall panel which extends from one of said top or bottom walls, a tuck which extends from the other of said top or bottom walls and which is inserted between said end wall panel and a pair of inwardly folded gussets each of which extends from one of the ends of said end wall panel and from one of said side walls, said lid section being hingedly connected to the other end of said sleeve section in outwardly extending relation thereto and proportioned to cover the outwardly extending part of said inner tray to thereby at least substantially enclose the inner tray within said sleeve and lid sections, said lid section having a top wall, a pair of opposed generally triangular side walls, and an end wall of substantially the same size as said end wall of said sleeve section, each of said side and end walls having at least one second ply to provide greater strength therein, one of said plies of each of said lid side walls having an extension which overlies a portion of said lid top wall to provide greater strength therein, one of said plies of said lid end wall having a pair of outwardly extending locking tabs and an extending strip which overlies the end portion of said lid top wall to also provide greater strength therein, said strip having ends which abut against the adjacent lid side walls to assist in maintaining the plies of said lid side walls in adjacent position, and each of said locking tabs inter-engaging with a portion of one of the adjacent lid side walls to assist in maintaining said lid in erected condition.

2. A paperboard outer carton for use in cooperation with a generally rectangular inner container removably positionable within said outer carton, said outer carton being formed from a single blank and comprising a sleeve section being of generally rectangular cross section, being closed by a multiply end wall at one end, and having top, bottom, and side walls of equal length proportioned to slidably receive a portion of the inner container with the remainder thereof extending outwardly from said sleeve section, said lid section being hingedly connected to the other end of said sleeve section in outwardly extending relation thereto and proportioned to cover the outwardly extending portion of the inner container and to thereby at least substantially enclose the inner container within said sleeve and lid sections, said lid having a top wall, a pair of opposed generally triangular side walls, and an end wall of substantially the same size as said end wall of said sleeve section, each of said lid side and end walls having at least one second ply to provide greater strength therein, one of said plies of each of said lid side walls having an extension which overlies a portion of said lid top wall to provide greater strength therein, one of said plies of said lid end wall having a pair of outward extending locking tabs, and each of said locking tabs inter-engaging with a portion of one of the adjacent lid side walls to assist in maintaining said lid in erected condition.

3. A paperboard carton for use in co-operation with a generally rectangular inner container removably positionable within said outer carton, said outer carton being formed from a single blank and comprising a sleeve section and a lid section, said sleeve section being of generally rectangular cross section, being closed by a multiply end wall at one end, and having top, bottom, and side walls of equal length proportioned to slidably receive a portion of the inner container with the remainder thereof outwardly extending from said sleeve section, said sleeve end wall being formed by an end wall panel which extends from one of said top or bottom walls, a tuck which extends from the other of said top or bottom walls and which is inserted between said end wall panel and a pair of inwardly folded gussets each of which extends from one of the ends of said end wall panel and from one of said side walls, said lid section being hingedly connected to the other end of said sleeve section in outwardly extending relation thereto and proportioned to cover the outwardly extending portion of the inner container and to thereby at least substantially enclose the inner container within said sleeve and lid sections, said lid having a top wall, a pair of opposed generally triangular side walls, and an end wall of substantially the same size as said end wall of said sleeve section, each of said lid side and end walls having at least one second ply to provide greater strength therein, one of said plies of each of said lid side walls having an extension which overlies a portion of said lid top wall to provide greater strength therein, one of said plies of said lid end wall having a pair of outward extending locking tabs and an extending strip which overlies the end portion of said lid top wall to provide greater strength therein, said strip having ends which abut against the adjacent lid side walls to assist in maintaining the plies of said lid side walls in adjacent position, and each of said locking tabs inter-engaging with a portion of one of the adjacent lid side walls to assist in maintaining said lid in erected condition.

4. A paperboard box assembly comprising an outer carton and an inner tray slidably positionable in said outer carton, said tray being of generally rectangular cross section having an open top and including a bottom wall and a pair each of opposed side and end walls, said outer carton being formed from a single blank and comprising a sleeve section and a lid section, said sleeve section being of generally rectangular cross section and being proportioned to slidably receive a part of said inner tray with the remainder thereof extending outwardly from said sleeve section, said lid section being hingedly connected to the end of said sleeve section in outwardly extending relation thereto and proportioned to cover the outwardly extending part of said inner tray to thereby at least substantially enclose the inner tray within said sleeve and lid sections, said lid section having a top wall, an end wall, and a pair of opposed side walls, each of said lid side and end walls having at least one second ply to provide greater strength therein, and one of said plies of each of said lid side walls having an extension which overlies a portion of said lid top wall to provide greater strength therein.

5. A paperboard box assembly comprising an outer carton and an inner tray slidably positionable in said outer carton, said tray being of generally rectangular cross section having an open top and including a bottom wall and a pair each of opposed side and end walls, said outer carton being formed from a single blank and comprising a sleeve section and a lid section, said sleeve section being of generally rectangular cross section and being proportioned to slidably receive a part of said inner tray with the remainder thereof extending outwardly from said sleeve section, said lid section being hingedly connected to the end of said sleeve section in outwardly extending relation thereto and proportioned to cover the outwardly extending part of said inner tray to thereby at

least substantially enclose the inner tray within said sleeve and lid sections, said lid section having a top wall, an end wall, and a pair of opposed generally triangular side walls, each of said lid side and end walls having at least one second ply to provide greater strength therein, one of said plies of each of said lid side walls having an extension which overlies a portion of said lid top wall to provide greater strength therein, and one of said plies of said lid end wall having an extending strip which overlies the end portion of said lid top wall to also provide greater strength therein.

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