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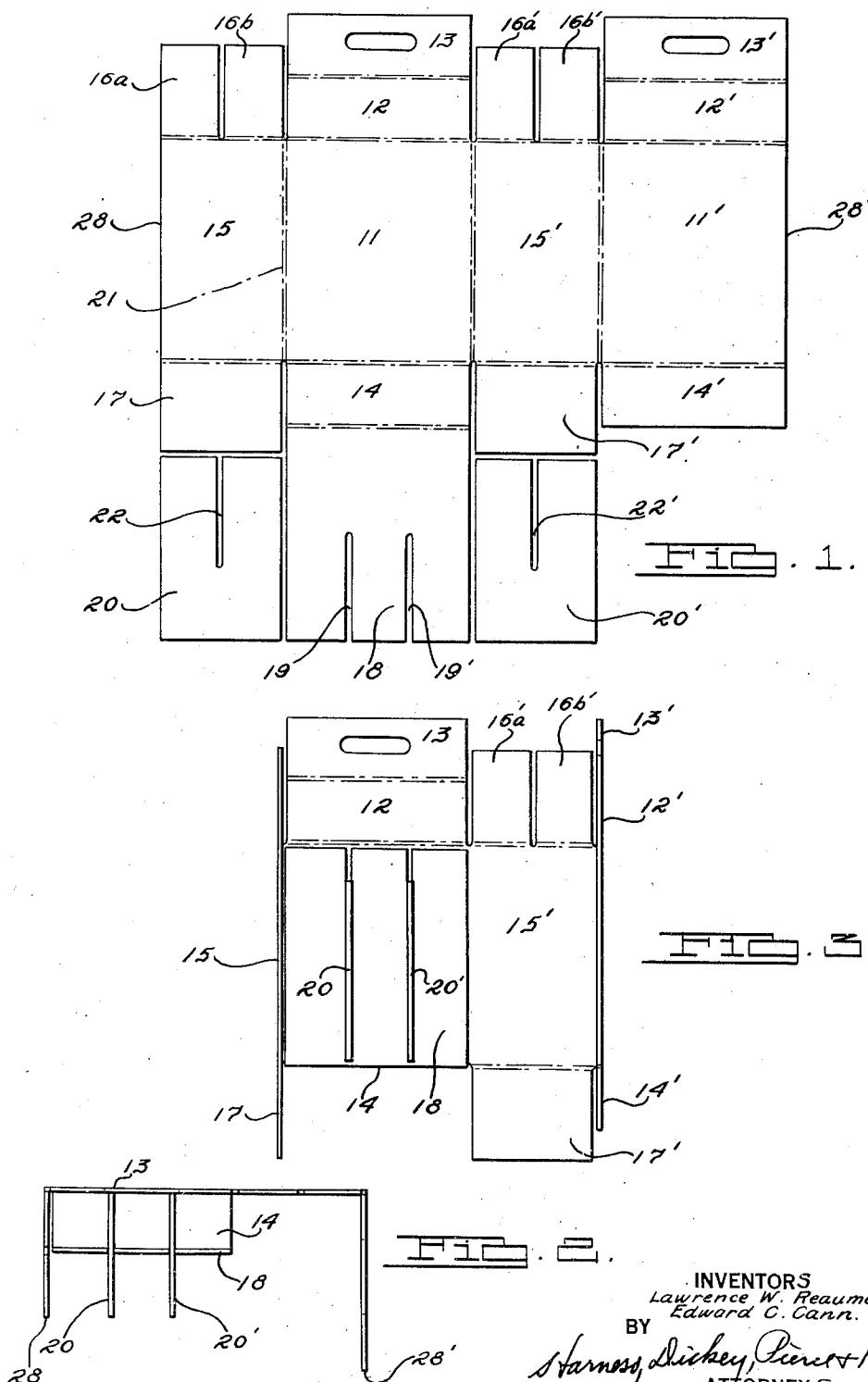
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HANDLE INCLUDING CARTON

Filed April 2, 1930

2 Sheets-Sheet 1



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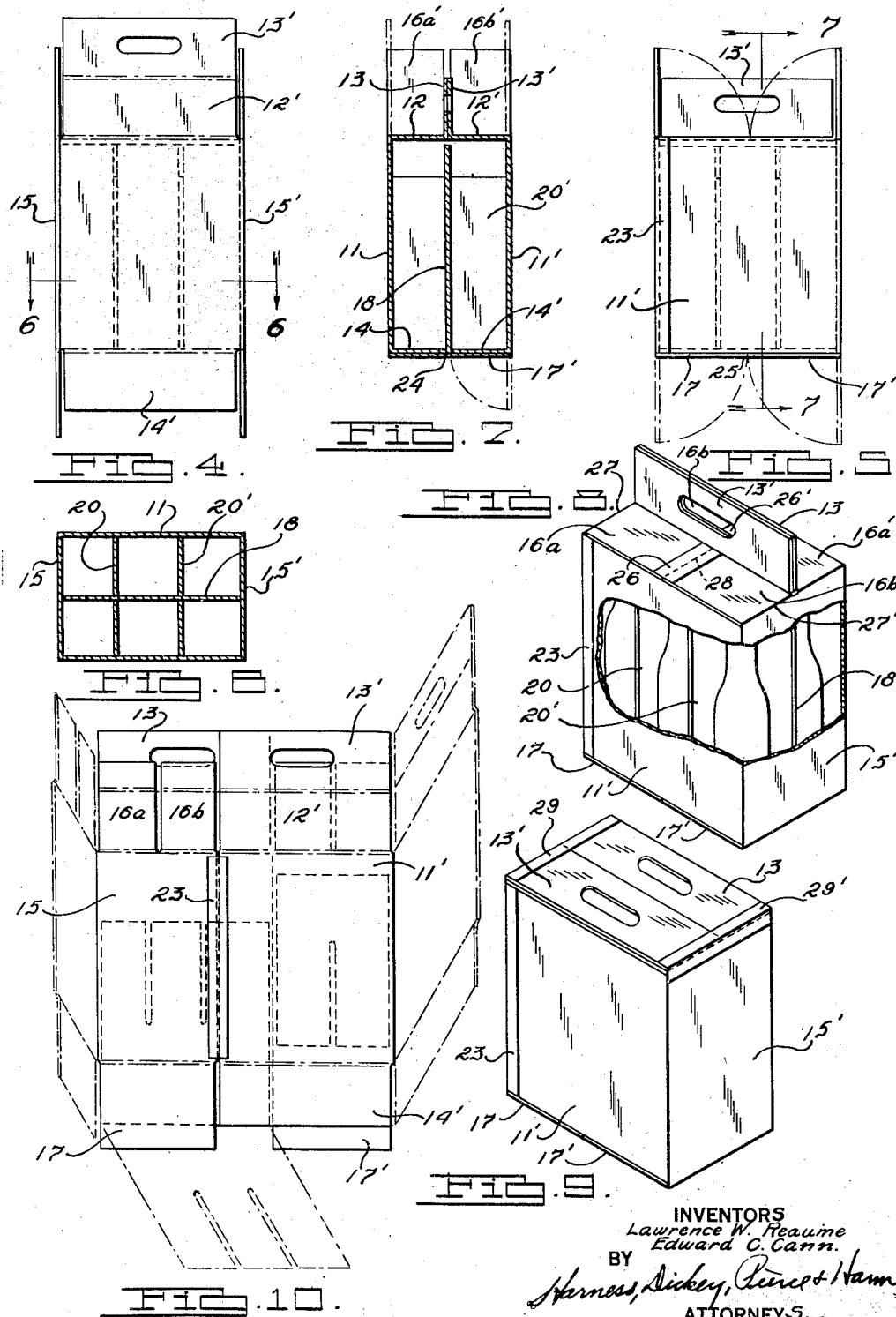
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UNITED STATES PATENT OFFICE

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HANDLE-INCLUDING CARTON

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The general purposes of this invention being indicated by the above title, it may be understood that said invention aims particularly to provide rugged cartons which can be knocked down for shipment but which include handles; and the preferred construction of said cartons is such that, after they reach the hands of the consumer, with bottled goods or the like therein, although said cartons retain their rectangular form, the handle elements (herein integral with side elements of the cartons) may be disposed in an upright central position, rendering the same conveniently accessible for use.

It is an incidental object of the present invention to provide blanks which are suitable not only to be folded for convenient shipment in flat packages, but which are easily transformed, by the recipient, into complete units,—ready for the reception of bottles; and, in some embodiments of the invention, a joint between a side element and an end element being closed by the application of a suitable adhesive strip, or the like, before the mentioned blanks are packaged for shipment, the respective blanks may require only to be expanded and provided with closure strips across the bottoms thereof in order to be ready for the reception of goods.

It is a further object of the present invention to provide inexpensive but comparatively rugged and durable cartons in which a main partitioning element, if included, is integral with one of a pair of half-bottom sections; and in preferred embodiments, said partitioning element being provided with suitable slots, so that slotted or other subsidiary partitioning elements may be retained thereby in spaced relationship within the completed carton.

In all forms of the present invention, the mentioned handle elements may be secured to side elements by half-top elements; and the preferred construction is such that, in case the end elements of the box are provided with integral quarter-top sections, the interconnection of oppositely extending pairs of the latter, as by means of adhesive strips, serves not only completely to enclose the contents of the carton but to reinforce the con-

nnection between the mentioned side elements and the mentioned handle elements,—while nevertheless permitting said handle elements to be flattened down, and optionally held down by adhesive strips, during shipment. 55

Other objects of the present invention, including a preferred sequence of steps in the completion of cartons from suitable blanks, may be best appreciated from the following description of an illustrative embodiment of 60 the invention taken in connection with the appended claims and the accompanying drawings.

Fig. 1 is a plan view showing a main blank and subsidiary partitioning blanks,—these latter being so positioned as to indicate how they may be economically cut from a suitable plural-ply paper or other carton material. 35

Figs. 2 and 3 are, respectively, a top plan view and an elevational view showing an intermediate stage in the production of a box from blanks such as are illustrated in Fig. 1. 70

Figs. 4 and 5 are, respectively, views corresponding to Fig. 3 but showing the results of additional steps. 75

Fig. 6 is a section, taken substantially as indicated by the line 6—6 of Fig. 4.

Fig. 7 is a section taken substantially as indicated by the line 7—7 of Fig. 5.

Fig. 8 is a perspective view showing a 80 carton as completed, filled and closed, but with handle extensions disposed favorably to carrying the same.

Fig. 9 is a view similar to Fig. 8, but showing the handle extensions as folded and secured down suitably for shipment. 85

Fig. 10 is a view taken similarly to Fig. 1 but showing, by dotted lines, a preferred manner of folding and securing the abutting edges of blanks for shipment in flat packages. 90

Referring now to details of the illustrated embodiment of the invention, with reference to the blanks shown in Fig. 1, side elements 11 and 11' are shown as respectively integral not only with half-top elements 12, 12', respectively carrying handle extensions 13, 13', but with half-bottom elements 14, 14'; and end elements 15, 15', also integral with the side elements 11, 11', are shown as 100

including not only quarter-top tabs or elements 16a, 16b, and 16a', 16b', but additional half-bottom elements 17, 17'. The illustrated carton being designed to carry six bottles, 5 a main partitioning element 18, shown as single and as integral with the half-bottom element 14, may be provided with two slots 19, 19', adapted to receive subsidiary partitioning elements 20, 20',—the latter being set 10 in position after the carton is given a rectangular form by suitably folding the main blank along the various dot-and-dash lines 21.

In case a number of blanks are to be packaged 15 for transport to a user, the folding of the same may be carried, by the manufacturer, only to the point indicated in Fig. 10, as hereinafter described; but the complete process of forming a carton from a blank 20 will nevertheless be best understood by a description of the successive steps indicated in Figs. 2-8, inclusive. That is to say, comparing Figs. 2 and 3 with Fig. 1, it will be seen that the end element 15 and the half- 25 bottom element 14 may be folded at right angles to the side element 11,—the main partitioning element or elements 18 being then folded at right angles to the half-bottom element 14 and into parallelism with the side element 11; and the end element 15' and side element 11' may be disposed parallel with the end element 15. At this point, if desired, the subsidiary partitioning elements 20, 20', shown as provided with slots 22, 22', may be 30 interfitted within the slots 19, 19'; and the side element 11' may be swung into parallelism with the side element 11,—the result being the completion of a rectangular body as indicated in Figs. 4 and 6, including a 35 pair of side elements spaced apart by end elements and having handle elements formed integral therewith.

To hold the mentioned parts in their indicated relationships, the abutting edges of the 40 elements 15 and 11', if not previously secured together, may be at this time united, as by means of an adhesive strip 23; the half-bottom element 14' may be brought into the same plane with the half-bottom element 14; 45 and the additional half-bottom elements 17, 17', if provided, may be swung toward one another and secured in a common plane wherein they effectively reinforce the entire construction,—providing a double bottom for 50 the carton. Whether or not an adhesive strip is applied, as at 24, over the joint between the inner half-bottom elements 14, 14', the abutting edges of the outer half-bottom sections, 55 17, 17' should be permanently secured together,—as by means of an adhesive strip 25.

The carbon is now ready for the reception 60 of bottles, or the like. Upon the insertion thereof between the mentioned partitioning elements, the half-top sections 12, 12', may 65 be folded down into a common plane in such

a manner as to leave the handle elements 13, 13' projecting upwardly therebetween, into a conveniently accessible position; and these partitions may be retained in their position indicated in Fig. 7 by simply folding and 70 securing thereon the mentioned quarter-top sections. That is to say as best shown in Figs. 5, 7 and 8, leaving the handle elements 13, 13' in an upright position the quarter-top elements 16a and 16b' may have their abutting edges secured together by means such as by an adhesive strip 26, the corresponding edges of quarter-top sections 16b and 16a' being similarly secured, as by a strip 26'.

It will be seen that no part of the weight 80 of this carton and its contents is not carried by the partitioning element 18 (unless the latter is continued upward in a manner not shown), said weight being carried rather by the side and end elements described. The tabs or quarter-top sections will be seen to reinforce the edges 27, 27' in such a manner that but slight tension, if any, is put upon the strips 26, 26'; and although the handle elements 13, 13' are integral with the side 90 elements 11, 11', being connected therewith by the half-top elements 12, 12' (so that the carton might still be safely carried even if the edges 27, 27' should give way) a mere ripping of the strips 26, 26', as by the application of a pen-knife along the lines 28, enables the carton to be opened,—without damage thereto and in such manner as to permit of its repeated re-use.

It will be obvious that, depending upon 100 the commodities to be transported, the mentioned partitioning elements may or may not be included; and that, in case they are included, the subsidiary partitioning elements 20, 20' need not be placed in position until a package of the cartons reaches the user thereof.

It is suggested in Fig. 10 that, to package 110 a number of blanks of the described type, the main partitioning element 14 being first folded upwardly over the half-bottom element 14, the end element 15, and the side element 11', together with the associated parts projecting therefrom, be folded inward into parallelism with the elements 11 and 15',—the edges 28, 28' being then secured together, as by means of the adhesive strip 23. This construction will be seen to permit any desired 120 number of blanks to be stacked and secured together, with the subsidiary partitioning elements inserted within each folded blank in readiness for withdrawal and use in the indicated manner,—the recipient being required only to expand the blanks to rectangular form, without disturbing the strips 23, then downwardly to insert any subsidiary partitioning elements in any slots 19, 19', if provided, and to fold inwardly and secure the mentioned half-bottom elements, in readiness 130

for the insertion of bottles or other goods to be transported.

In case the filled cartons are to be shipped or compactly stored as such, as suggested in Fig. 9, the handle extension elements 13, 13' may be folded outwardly over the quarter-top sections (whether or not the latter are secured together, as by means of the strips 26, 26') and held in the parallel relationship in which they are shown in the figure last referred to by means such as additional adhesive strips 29, 29'. It will be obvious that the recipient of goods packed in the described manner need only cut or remove the strips last referred to in order to render the handles provided by the elements 13, 13' available for immediate use; and that, upon arrival at his destination, said recipient may then obtain access to the goods, without detriment to the carton, by merely slitting the strips 26, 26', in the manner above referred to.

Although the foregoing description has included details of but one embodiment of the present invention it should be understood that not only various features thereof may be independently employed but also that numerous modifications, additional to any suggested herein, might easily be devised by skilled workers, if informed of the foregoing,—all without departure from the scope of the present invention as the latter is indicated above and in the following claims.

We claim:

1. In a carton: a rectangular body including a pair of side elements spaced by a pair of end elements; half-bottom elements integral with one of said pairs of elements; and a partition element integral with one of said half-bottom elements,—the other of said pairs of elements being provided with additional half-bottom elements adapted to be so secured as to retain the first mentioned half-bottom elements and said partition element.

2. In a rectangular body including a pair of side elements spaced by a pair of end elements; half-bottom elements integral with one of said pairs of elements; and a partition element integral with one of said half-bottom elements,—the other of said pairs of elements being provided with additional half-bottom elements adapted to be so secured as to retain the first-mentioned half-bottom elements and said partition element, and one of said pairs of elements being provided with integral means for carrying said carton.

3. A carton comprising a pair of side elements, a pair of half bottom elements integral with the side elements one of the bottom elements terminating in an internal partition, a pair of half top elements integral with the side elements, said half top elements terminating in a handle portion and a pair of end elements, each of the end elements hav-

ing portions thereon, for supporting the top and bottom elements.

4. A carton comprising a pair of side elements, a pair of half bottom elements integral with the side elements, one of the end elements terminating in a slotted integral partition member, a pair of half top elements terminating in a vertically disposed carrying handle, a pair of end elements, each of said end elements having a slotted top flap centrally disposed over the handle portion, for transmitting a portion of the load from the side elements to the end elements, a pair of inwardly extending bottom flaps integral with the end elements for supporting the bottom of the carton, and a plurality of separated members each having a centrally disposed slot therein co-acting with the slotted partition member.

5. A carton comprising a pair of side elements spaced by a pair of end elements, a pair of half bottom elements integral with the side elements, at least one of said half bottom elements having an internal central partition element integral therewith, separator elements disposed within the carton and extending at right angles to said partition element, a pair of half top elements each terminating centrally of said carton in a vertically disposed carrying handle, a plurality of flap portions integral with the end portions, said flap portions co-acting with said top and bottom elements for reinforcing said top and bottom elements.

6. A carton comprising a pair of side elements spaced by a pair of end elements, a pair of half bottom elements integral with the side elements, at least one of said bottom elements having an internal central partition element integral therewith, slotted separator elements disposed within the carton and extending between said side elements at right angles thereto, flap portions integral with the end portions, said flap portions co-acting with the bottom elements in supporting the weight of the article to be carried, a pair of half top portions integral with the side elements, said top portions terminating centrally of said carton in vertically disposed carrying handles, a pair of slotted flap portions integral with the end elements and extending inwardly from the top edges thereof, said flap portions overlapping said half top portions and co-acting therewith for assisting and reinforcing the top portion to maintain said handle portions in normal operative position.

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