Dec. 24, 1963 L. C. GISH 3,115,273

CARRIER CARTON

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Fig. 1.

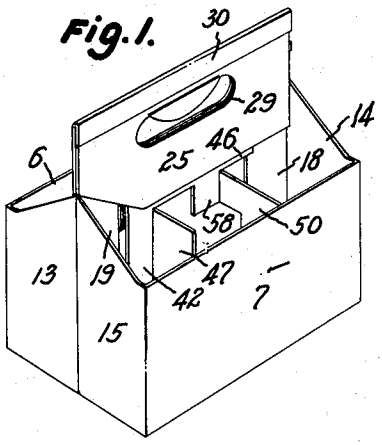


Fig. 2.

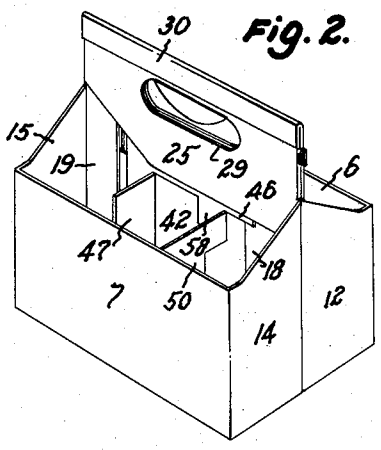


Fig. 3.

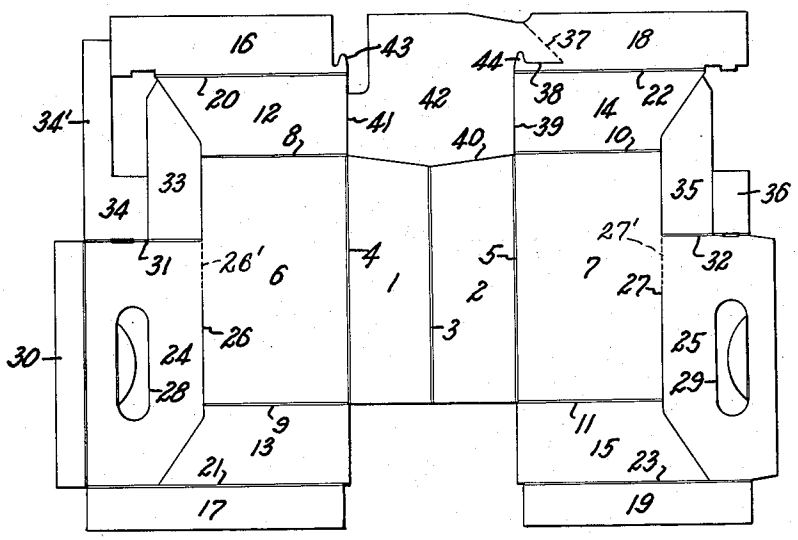


Fig. 4.

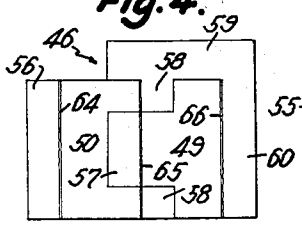
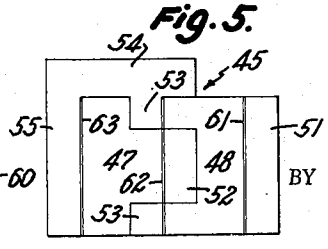


Fig. 5.



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Fig. 6.

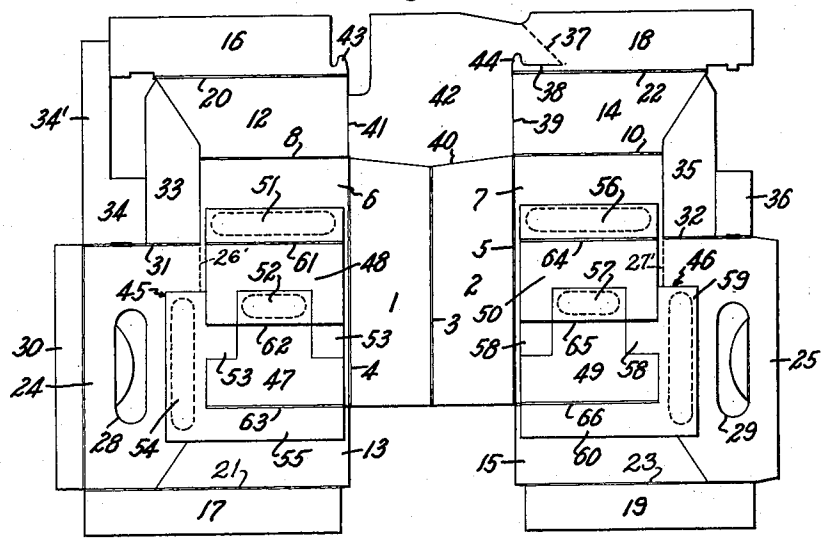


Fig. 7.

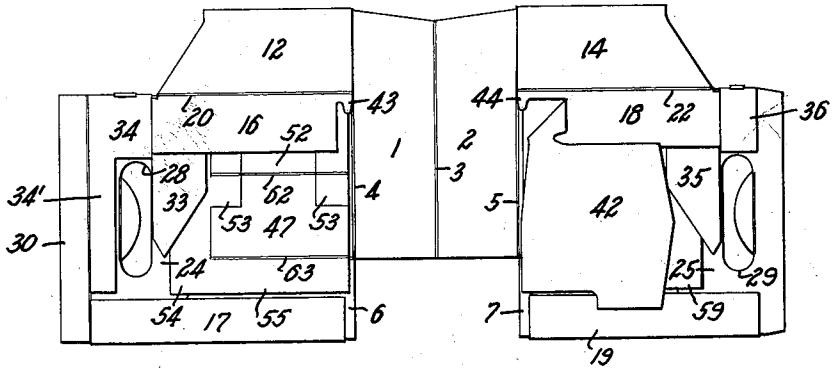


Fig. 8.

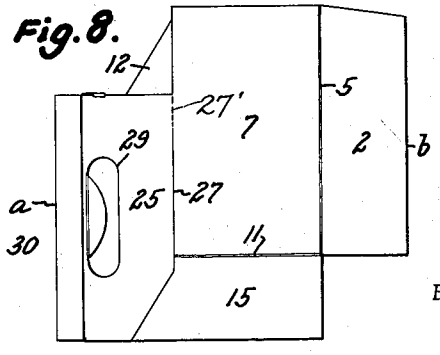
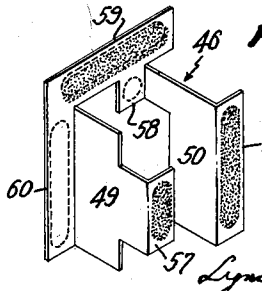


Fig. 9.



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CARRIER CARTON

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Fig. 10.

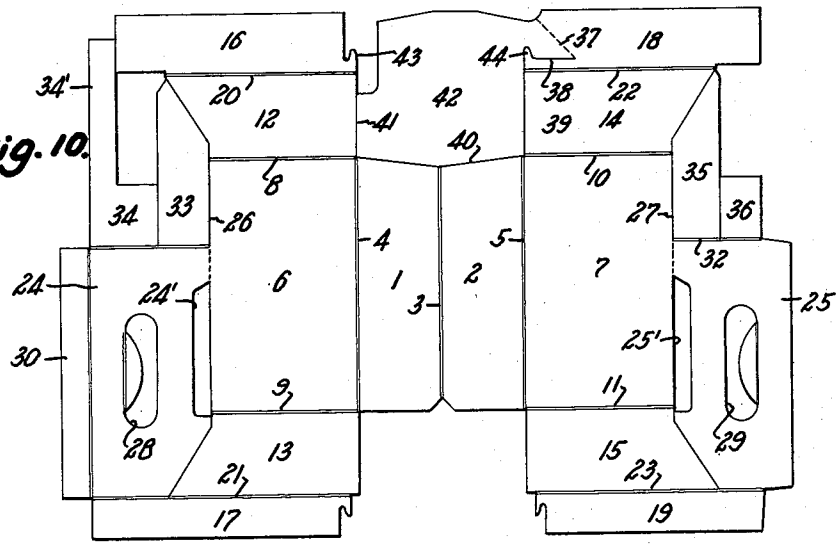


Fig. 11.

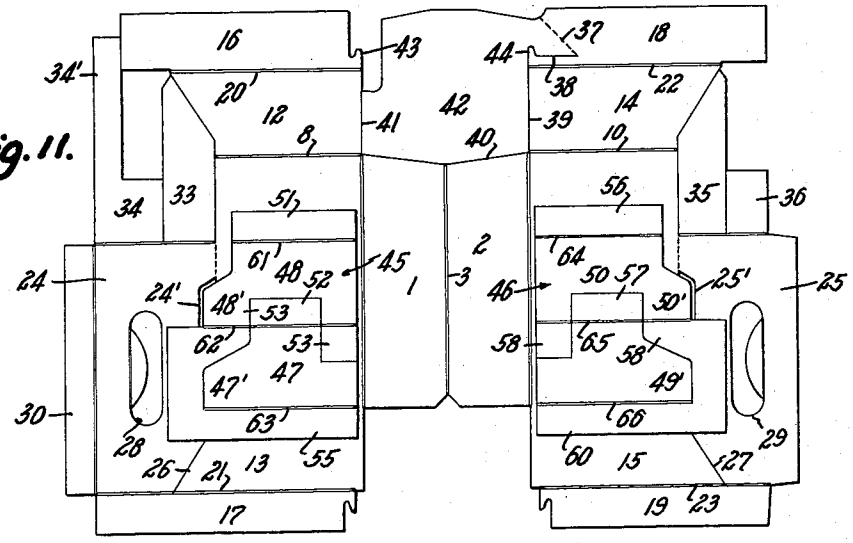
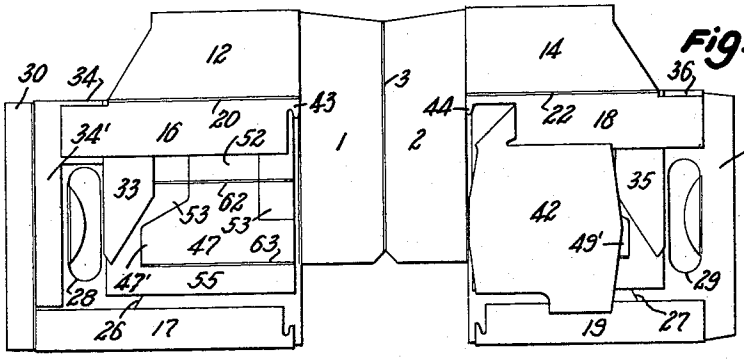


Fig. 12.



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CARRIER CARTON

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Fig. 13.

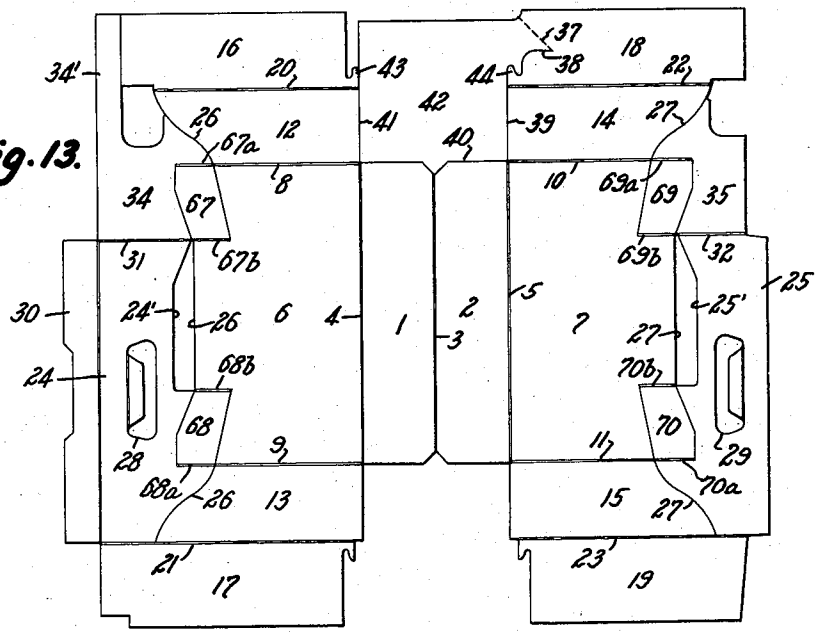
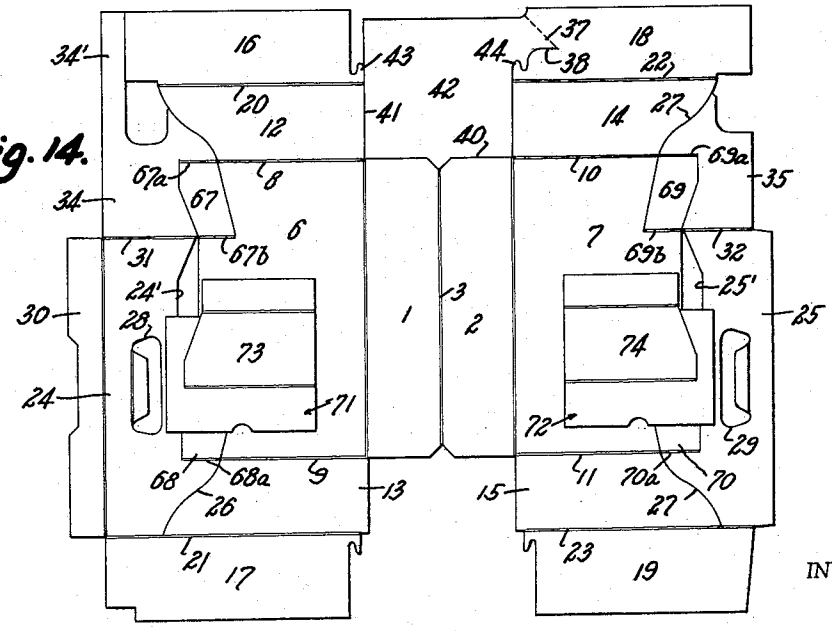


Fig. 14.



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CARRIER CARTON

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Fig. 15.

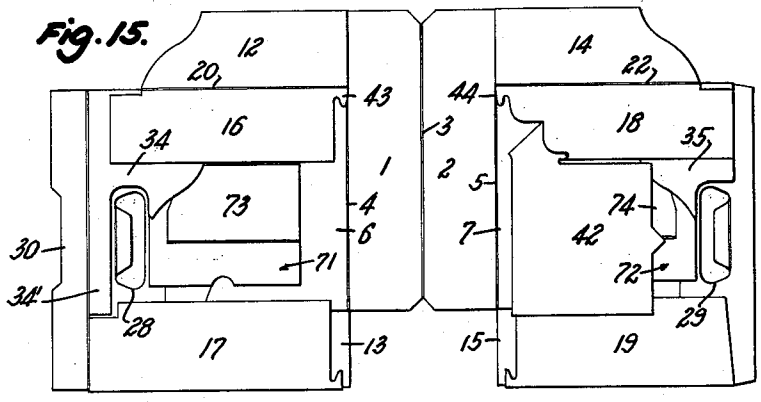


Fig. 16.

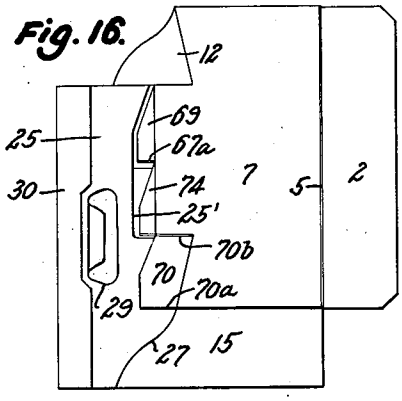
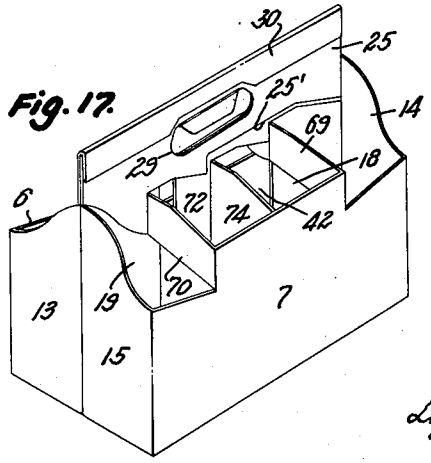


Fig. 17.



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United States Patent Office 3,115,273 Patented Dec. 24, 1963

3,115,273

CARRIER CARTON

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Filed Sept. 5, 1962, Ser. No. 221,476
8 Claims. (Cl. 220—115)

This invention relates to article carrier cartons, and it has special reference to compartmented paperboard carriers, primarily for bottle goods, of the types shown generally in applicant's Patents No. 2,996,216, granted August 15, 1961, No. 3,037,661, granted June 5, 1962, and No. 3,037,662, granted June 5, 1962; and in the patents of Michael H. Kowal No. 2,692,700, granted October 26, 1954, and No. 2,712,397, granted July 5, 1955, although differing therefrom in some major structural features of design and assembly.

One object of the invention is to provide an article carrier which is formed from a flat-folded and glued paperboard blank, and which, when erected to article-receiving condition will provide a plurality of separate compartments for the articles arranged in two rows longitudinally of the carrier and thus separated by a combined partition and carrying handle, and the individual articles of such two rows being separated from each other by transverse partition elements which extend between the respective side walls and combined partition and handle, said transverse partition elements and combined longitudinal partition and handle being of the so-called "full depth" type as distinguished from those of strap, or abbreviated panel, type, thus serving to provide adequate complete separation of the articles within the carrier, and this is of particular desirability when the articles are bottles.

As will be apparent from an examination of applicant's patents hereinbefore referred to, carriers of this type, broadly considered, are now well known and in rather general commercial use, but the blanks from which they are formed are of complicated design requiring cuts and folding scores of such relatively intricate pattern that the planning and construction assembly of the cutting and scoring die means involve considerable in production costs. It is therefore a further object of the invention to reduce production costs, and consequently the selling price of carriers of this type by simplifying not only the blank cutting and scoring operation but also the blank assembling, folding and gluing operation.

With these and other objects and advantages in view, it will be apparent from the following description that the carrier carton of the invention comprises a multiple blank including a main blank element which has defined therein, by cuts and folding scores, a bottom, side and end walls and a combined partition and carrying handle, and supplemental blank means so cut and scored as to provide transverse partition means having elements for their attachment both to the side walls and the combined partition and handle of the main blank element, said main blank element and supplemental blank means being united in flat-folded and glued assembly by relatively simple positioning, folding and gluing operations performed on standard types of machines, all as will be explained hereinafter more particularly and finally claimed.

In the accompanying drawings illustrating the invention, in the several figures of which like parts are similarly designated:

FIG. 1 is a perspective view of one side and end of an erected carrier carton embodying the structural features of the invention,

FIG. 2 is a view similar to FIG. 1 showing the same side, but the opposite end, of the carton,

FIG. 3 is a plan view of the inner face of one preferred

form of the main blank element of the carton as shown in FIGS. 1 and 2.

FIGS. 4 and 5 are plan views, right and left, of the supplemental blank means,

FIG. 6 is a view similar to FIG. 3, but showing the supplemental blank means properly applied to the main blank element,

FIG. 7 shows the parts illustrated in FIG. 6 subsequent to performance thereon of the first three folding and gluing operations,

FIG. 8 shows the completely flat-folded and glued carton,

FIG. 9 is a perspective view showing the manner in which the supplemental blank means assume their partition-forming disposition in the set-up carton,

FIGS. 10, 11 and 12 are views similar to FIGS. 3, 6 and 7, respectively, but illustrating modified forms of main and supplemental blanks,

FIGS. 13 and 14 are views similar to FIGS. 10 and 11, but illustrating further modified forms of main and supplemental blanks, and

FIGS. 15, 16 and 17 are views similar to FIGS. 7, 8 and 1, respectively, but related to the modification illustrated in FIGS. 13 and 14.

Having reference to FIG. 3 it will be seen that the main blank element includes a bottom comprising halves 1 and 2 relatively flat-foldable upon a score 3. The outer edges of the bottom halves 1 and 2 are joined on folding scores 4 and 5, respectively, to side walls 6 and 7, having hinged to the opposite ends thereof on folding scores 8, 9 and 10, 11, respectively, end wall halves 12, 13 and 14, 15 provided, respectively, with glue flaps 16, 17 and 18, 19, joined thereto on folding scores 20, 21 and 22, 23, respectively.

Lying in the plane of the blank and joined to the glue flaps 17 and 19 on the scores 21 and 23, respectively, are handle members 24 and 25 which serve also as parts of the longitudinal partition and are separable from the adjoined side walls 6 and 7, and end wall halves 12, 13 and 14, 15 on lines of cuts 26 and 27 and perforations 26' and 27', respectively. The perforations 26' and 27', which, as shown, are in alignment with the cuts 26 and 27 forming the major extent of these lines of separation, and are for the purpose of providing portions of the blank lying in such lines which are not completely severed, thus facilitating handling of the blank during the folding and gluing operations, and serving to retain it in flat-folded condition, but being readily rupturable when the carton is squared up to usable form with the side walls 6 and 7 spaced laterally from the handle members 24 and 25, as shown, for example in FIGS. 1 and 2. The handle members are provided with similar hand or finger holes 28 and 29, respectively, which mate when the blank is given its final fold during the folding and gluing operation, and the handle member 24 is provided with a finish glue flap 30 then joined to the handle member 25 as is customary.

To those edges of the handle members 24 and 25 opposite the glue flaps 17 and 19, respectively, are joined, on folding scores 31 and 32, reinforcing flaps 33, 34 and 35, 36, the flap 34 being provided with an extension 34' which, upon folding, borders the upper edge of the finger hole 28.

Joined to the glue flap 18 upon a diagonal folding score 37, and separable therefrom, and from adjacent elements of the blank upon cuts 38, 39, 40 and 41, is a partition panel 42, which, in the finished folded and glued assembly of the blank, forms, with the joined handle members 24 and 25, and glue flaps 16, 17, 18 and 19, a full depth longitudinal partition. It will be noted that the ultimate bottom edges of the glue flaps 16 and 18 are so cut as to provide hook means 43 and 44 which, when

ultimately glued together provide a hook for engagement with the edge of the bottom defined by the cut 40.

Having reference to FIGS. 4 and 5, it will be seen that the supplemental blank means, which may be made in rights and lefts or merely reversed face for face to accommodate them to the side walls 6 and 7, comprises normally flat elements 45 and 46 provided with cuts and folding scores defining transverse partition elements 47, 48 and 49, 50, respectively, and glue flaps 51, 52, 53, 54, 55 and 56, 57, 58, 59, 60, respectively, the folding scores 61, 62, 63 and 64, 65, 66, respectively, providing the means on which hinging movement of the partition elements 47, 48 and 49, 50 between the side walls 6 and 7 and the combined handle and longitudinal partition may take place when the carton is erected from flat-folded to usable condition.

In assembling the blank elements and accomplishing their flat folding and gluing into a unitary, easily erectable carrier carton, it will be apparent, by reference to FIGS. 6 to 8, that the supplemental blanks 45 and 46 are so positioned in patch form, upon the side walls 6 and 7 that their folding scores 61, 62 and 64, 65, respectively, lie on imaginary lines which divide these side walls into thirds (this carton being designed to carry six articles in two rows of three articles each) and are thus secured by adhesive applied beneath the glue flaps 51, 52, 54 and 56, 57, 59 so that the flaps 51, 52 and 56, 57 are attached to the side walls 6 and 7, respectively, and the flaps 54 and 59 are adhesively attached to the handle members 24 and 25, respectively. Application of the adhesive is indicated in broken outline in FIG. 6.

Then, with adhesive applied to the exposed faces of the reinforcing flaps 33 and 35 these flaps are folded upon the scores 31 and 32 flat against, and adhered to, the underlying portions of the handle members 24 and 25, and of the glue flaps 54 and 59, respectively, of the supplemental blanks 45 and 46. Next, the end wall members 12 and 14 are folded upon their respective scores 8 and 10 over, and flat upon, the underlying parts of the blanks, the flap 34 with its extension 34', and the flap 36, are folded flat against and adhesively secured to the then underlying parts, and the glue flaps 17 and 19 are folded upon their respective scores 21 and 23.

Now, with adhesive applied to the glue flaps 58, 53 and 60 of the supplemental blank 46, the partition panel 42 is folded upon its diagonal score 37 over and against underlying parts and is adhered to the said flaps 58, 53 and 60 and, at its edges, to the main glue flaps 18 and 19, all as indicated in FIG. 7.

Finally, with adhesive applied to the exposed faces of the glue flaps 16, 17, 18 and 19, to the reinforcing and finish flaps 33, 35, 34, 34', 36 and 30, to the glue flaps 54 and 55 of blank 45, the main blank is folded on the median score 3 of the bottom 1—2 to secure the glue flaps 16, 18 and 17, 19 and the handle and longitudinal partition parts together, and with the finish flap 30 secured to the proximate edge portions of the handle member 25, all as shown in FIG. 8.

The thus flat-folded and adhesively assembled carton may be squared up to usable form, as shown in FIGS. 1 and 2, simply by the application of pressure to the opposite edges *a* and *b* (FIG. 8) of the blank, which will serve to rupture the side walls 6 and 7 from the handle members 24 and 25 on the lines of perforations 26' and 27' and thereafter engaging the edge 40 of the bottom 1—2 with the adhesively joined hook means 43, 44.

The positions assumed by the parts of a supplemental blank, upon erection of the carton, are well shown in FIG. 9 in which the presence of adhesive is also shown by broken outlines, where concealed, and by stippling, where in view.

In the modification shown in FIGS. 10 to 12 slight differences in structural details have been made, however, the main and supplemental blanks are essentially the same as those of the embodiment illustrated in FIGS. 1 to 9, and their parts have been similarly designated, but the carton of this modification, being designed to receive bottles taller than those for which the embodiment of FIGS. 1 to 9 is best adapted.

As shown, the height of the parts which provide the combined longitudinal partition and handle member, and the side walls, is slightly greater than in the embodiment of FIGS. 1 to 9, and the transverse partition elements 47, 48 and 49, 50 of the supplemental blanks 45 and 46, respectively, are provided with upward extensions 47', 48' and 49', 50', respectively, to adequately increase their height adjacent to the said partition and handle member. Also, the handle members 24 and 25 are apertured at 24' and 25', respectively, see particularly FIG. 10, to afford clearance for these extensions 47', 48' and 49', 50' during their hinging movement on the scores 63, 62 and 66, 65, respectively, when the carton is squared up to erected condition.

Obviously, when the reinforcing flaps 33 and 35 are flat-folded and glued, adhesive will be omitted from their areas which overlie the extensions 48' and 50', respectively.

In the modification illustrated in FIGS. 13 to 17, which is directed to a carrier carton for accommodating eight bottles arranged in two rows of four bottles each, rather than six bottles in two rows of three as are the other embodiments, the provision of full depth transverse partition elements may, to some extent, be sacrificed in the interest of simplicity of design and assembly, and transverse separator straps 67, 68 and 69, 70 of more or less conventional form, hinged on hinging scores 67*a*, 67*b*, 68*a*, 68*b* and 69*a*, 69*b*, 70*a*, 70*b*, to the handle members 24 and 25, and side walls 6 and 7, respectively, are combined with supplemental blanks 71 and 72, each having only a single transverse partition element 73 and 74, respectively, similar in major conformation to those of the modification of FIGS. 10 to 12, in order to provide the desired four bottle compartments at each side of the combined longitudinal partition and handle member. Also, the handle members 24 and 25 are apertured at 24' and 25', respectively, to provide clearance for the upper ends of the partition elements 73 and 74 in a manner similar to that of the modification of FIGS. 10 to 12.

From the foregoing description, taken in connection with the disclosure of the drawings, it will be apparent that the invention provides carrier cartons which are of strong construction, of attractive appearance, particularly when artistically ornamented by printing, and relatively inexpensive to produce as compared with carriers for similar purposes now known.

As previously stated hereinbefore, the main blanks are of simple construction and require for their production a minimum area of paperboard and a minimum of cuts and folding scores, the latter serving to greatly simplify the assembly and number of operative elements necessary to provide proper cutting and scoring die means. Also, the supplemental blanks, which may be referred to as patches or of patch form, applied to the main blank, can be formed from scrap paperboard material, thus making for further economy.

Furthermore, the fact that the cartons of the invention may be assembled on standard types of folding and gluing machines having provision for the feeding and registered gluing of applied patches or the like, or on machines to which such feeding, registering and gluing mechanisms may be added within the general operative concepts of the machines, makes for still further economy in production and hence in cost to the consumer.

Various changes and modifications are considered to be within the principle of the invention and the scope of the following claims.

What I claim is:

1. A carrier carton, comprising main and supplemental blank means, said main blank means including as relatively foldable elements a bottom, side and end walls, and

a longitudinal handle member disposed in spaced relation to the side wall, and said supplemental blank means comprising transverse partition means disposed to span the space between said handle member and side wall and provided with means for hingedly connecting its inner and outer ends to said handle member and side wall, respectively, the means for thus hingedly connecting its ends comprising glue flaps integral with, and defined from, said partition means on folding scores and secured to said handle member and side wall for relative flat-folding thereof.

2. A carrier carton as defined in claim 1, in which said supplemental blank means is of patch form and is initially separate from the main blank.

3. A carrier carton as defined in claim 1, in which the main blank means si of flat-folded and glued form, and the supplemental blank means is initially separate from said main blank means and is joined to the handle member and side wall during the folding and gluing of the main blank.

4. A carrier carton, comprising initially separate main and supplemental blank means, said main blank means including as relatively foldable elements a bottom, side walls, end walls, and a combined longitudinal partition and handle member disposed substantially medially of said end walls and serving to divide the space between said side walls into two similar compartments, and said supplemental blank means comprising partition means disposed transversely of said compartments and spanning the spaces therein between said combined partition and handle member and side walls and provided with means for hingedly connecting their opposite inner and outer ends to the adjacent opposite sides of said combined partition and handle member and to said side walls, respectively, the means for thus hingedly connecting the said ends of said partition means comprising glue flaps integral with, and defined from, said partition means on folding scores and secured to said combined partition and handle member and said side walls for relative flat-folding thereof.

5. A carrier carton as defined in claim 4, in which the supplemental blank means are of flat patch form including cuts and folding scores defining therein the partition means and their said glue flaps and hinge connections.

6. A carrier carton as defined in claim 5, in which the main blank means is of flat-folded and glued form, and the glue flaps of said supplemental blank partition members are normally initially coplanar with said partition members and are adhesively secured to said side walls and combined partition and handle member during the folding and gluing of the main blank means.

7. A carrier carton as defined in claim 1, in which said supplemental blank means includes two transverse partition elements and is adapted to divide the said space into three compartments.

8. A carrier carton as defined in claim 4, in which the supplemental blank means at each side of said combined partition and handle member includes two transverse partition elements and is adapted to divide the space between said side and the adjacent side wall into three compartments.

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