May 5, 1953 K. T. BUTTERY 2,637,484

COLLAPSIBLE CARTON

Filed Aug. 19, 1949 2 SHEETS—SHEET 1

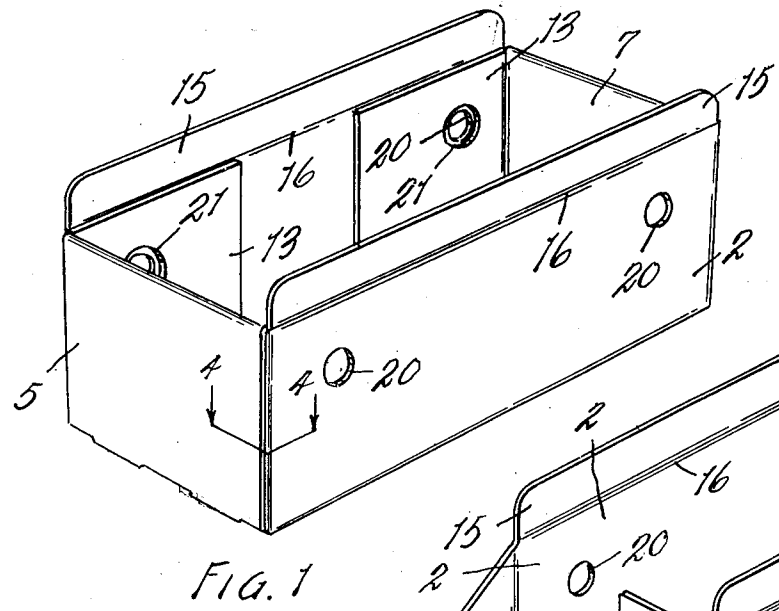


FIG. 1

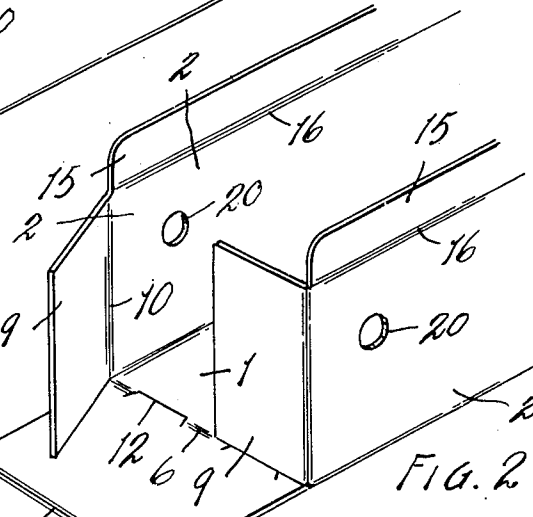
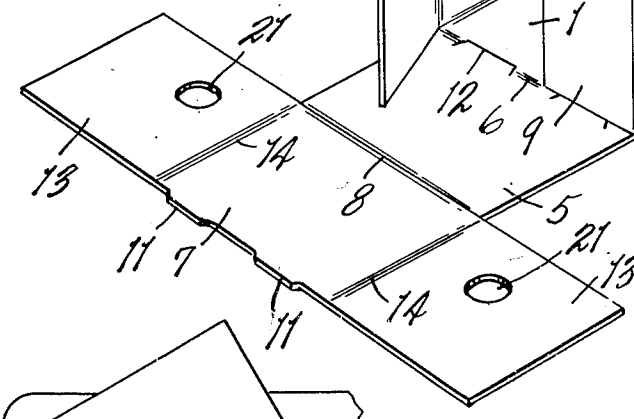


FIG. 2



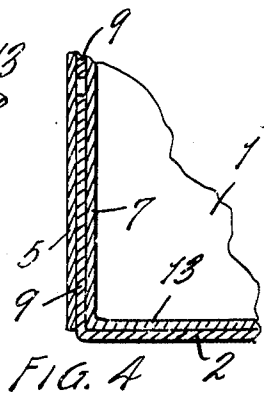


FIG. 4

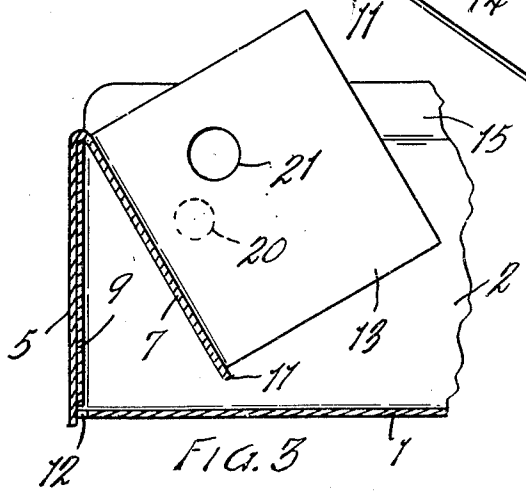


FIG. 3

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COLLAPSIBLE CARTON

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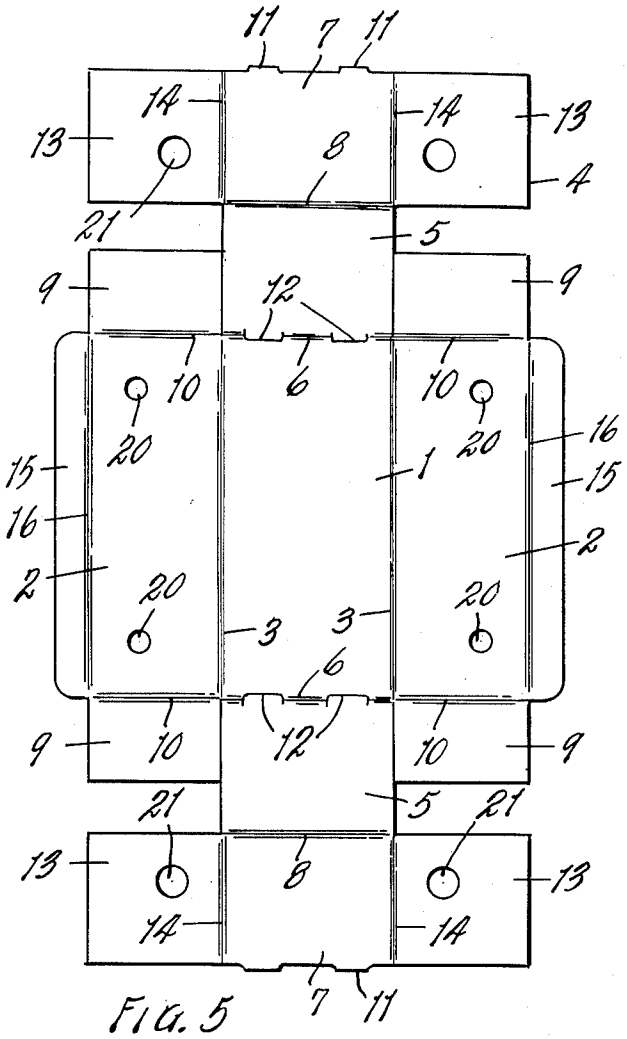


FIG. 5

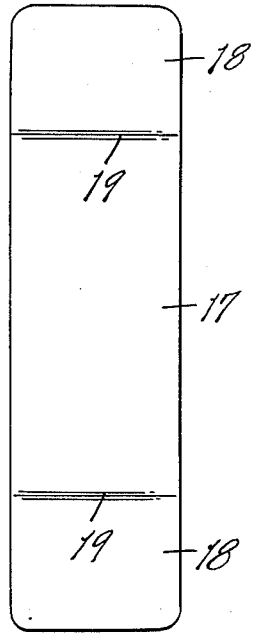


FIG. 6

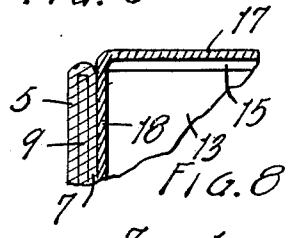


FIG. 8

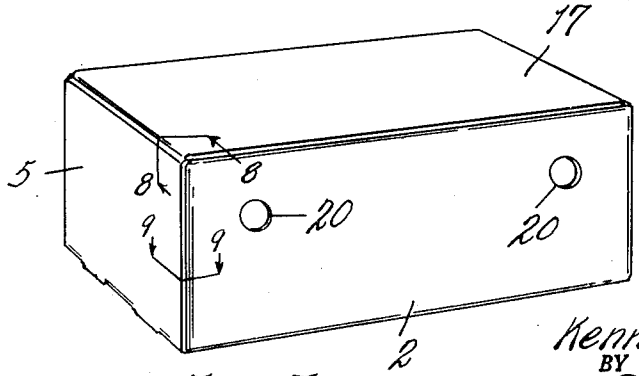


FIG. 7

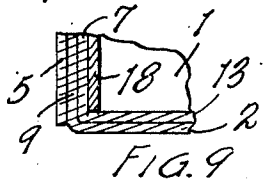


FIG. 9

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COLLAPSIBLE CARTON

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3 Claims. (Cl. 229—34)

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This invention relates to improvements in collapsible cartons or containers.

The main objects of this invention are:

First, to provide a collapsible carton or container formed of paper board container stock which is formed of an integral blank, is easily erected, and when erected is suitable for a shipping or delivery container for relatively heavy materials.

Second, to provide a container having these advantages in which the several coacting parts are so arranged that they serve to brace and support each other.

Objects relating to details and economies of the invention will appear from the description to follow. The invention is defined and pointed out in the claims.

A preferred embodiment of the invention is illustrated in the accompanying drawing, in which:

Fig. 1 is a perspective view of the carton embodying my invention in erected position with the top flaps in upright position.

Fig. 2 is a fragmentary perspective view illustrating certain of the steps in the erection of the carton.

Fig. 3 is a fragmentary longitudinal section illustrating additional steps in the erection of the carton.

Fig. 4 is an enlarged fragmentary section on a line corresponding to line 4—4 of Fig. 1.

Fig. 5 is a plan view of the carton in the flat or complete knockdown.

Fig. 6 is a plan view of the cover in the flat.

Fig. 7 is a perspective view of the carton with the cover applied.

Fig. 8 is a fragmentary view in section on line 8—8 of Fig. 7.

Fig. 9 is a fragmentary sectional view on a line corresponding to line 9—9 of Fig. 7.

The carton or container of this invention is primarily designed for shipping or for use with relatively heavy materials and at the same time may be formed of a medium gauge of paper board stock. The structure in the embodiment illustrated formed of an integral blank comprises a bottom 1, side walls 2, 2 hingedly connected to the bottom at 3, 3, and end walls designated generally by the numeral 4 comprising outer end wall members 5, 5 which are hingedly connected to the ends of the bottom at 6, 6, and inner end wall members 7, 7 which are hingedly connected to the upper edges of the outer end wall members at 8, 8.

The side walls are provided with corner flaps 9 hingedly connected thereto at 10. These corner flaps are adapted to be folded inwardly upon

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the inner sides of the outer end wall members and the inner end wall members are folded over the corner flaps in supporting relation thereto. The inner end wall members are provided with tongues 11 on their swinging edges engageable with the slits 12 formed at the juncture of the outer end wall members and the bottom, the slits being desirably of U-shape so that the resulting tongue-like portions swing outwardly to open the slits for the tongues 11. The inner end wall members are provided with inner side wall extensions 13 hingedly secured thereto at 14 and adapted to fold against the inner sides of the side walls when the carton is erected, as is clearly shown in Fig. 1.

These inner side wall members 13, 13 are desirably of the height of the side walls and rest upon the bottom in supported relation thereto with their upper edges in the planes of the upper edges of the side walls. The inner end walls serve to brace the side walls against inward collapsing and the corner flaps which desirably rest on the bottom also serve to that end. The inner side wall members are desirably of substantial length, as is illustrated, so that they effectively reinforce the side walls and particularly the corners of the container.

The side walls are provided with top flaps 15 hingedly connected thereto at 16 to be folded inwardly over and in retaining relation to the inner side wall members. The cover 17 is provided with tucking flaps 18 hingedly connected thereto at 19, the cover being arranged over the inturned top flanges 15 and the tucking flaps 18 inserted between the ends of the top flaps and the end walls, as clearly shown in Figs. 7, 8 and 9. By this arrangement the cover is very effectively supported and retained.

The side walls in the embodiment illustrated are provided with ventilating openings 20 and the inner side wall members 13 are provided with ventilating openings 21 which register with the openings 20 when the box is fully erected. For certain products these ventilating openings are not necessary.

The cartons or containers of this invention are particularly well adapted for relatively heavy duty, although desirable for a wide range of uses. I have illustrated and described my invention in a highly practical embodiment thereof. I have not attempted to illustrate or describe other adaptations which I contemplate as it is believed this disclosure will enable those skilled in the art to embody or adapt my invention as may be desired.

Having thus described my invention, what I

claim as new and desire to secure by Letters Patent is:

1. A carton formed of an integral blank and comprising a bottom, side walls hingedly connected to the bottom, end walls comprising outer end wall members hingedly connected to the bottom and inner end wall members hingedly connected to the outer ends of the outer end wall members, the side walls having corner flaps hingedly connected to the ends thereof and adapted to be disposed on the inner sides of the outer end wall members when the carton is erected, the inner end wall members being folded inwardly over the corner flaps in retaining relation thereto with their ends in supporting relation to the side walls, said inner end wall members having inner side wall members of a height corresponding to the height of the side walls hingedly connected to their ends and positioned against the inner sides of the side walls in supported relation to the bottom, the inner end wall members being provided with locking tongues on their outer edges, there being slits at the juncture of the outer end wall members with the bottom retainingly receiving said tongues when the box is erected, the said side walls being provided with cover supporting top flaps on their upper edges foldable inwardly over the upper edges of the said inner side wall members and in supporting engagement with said upper edges, and a cover adapted to be positioned over said top flaps in support relation thereto and provided with end flaps inserted between the ends of the top flaps and said inner end wall members with the side edges of the cover end flaps in supporting engagement with the said inner side wall members, said side walls and inner side wall members being provided with ventilating openings which register when the container is erected.

2. A carton formed of an integral blank and comprising a bottom, side walls hingedly connected to the bottom, end walls comprising outer end wall members hingedly connected to the bottom and inner end wall members hingedly connected to the outer ends of the outer end wall members, the side walls having corner flaps hingedly connected to the ends thereof and adapted to be disposed on the inner sides of the outer end wall members when the carton is erected, the inner end wall members being folded inwardly over the corner flaps in retaining relation thereto with their ends in supporting relation to the side walls, said inner end wall members having inner side wall members of a height corresponding to the height of the side walls

hingedly connected to their ends and positioned against the inner sides of the side walls in supported relation to the bottom, the said side walls being provided with cover supporting top flaps on their upper edges foldable inwardly over the upper edges of the said inner side wall members, and a cover adapted to be positioned over said top flaps in supported relation thereto and provided with end flaps inserted between the ends of the top flaps and said inner end wall members with the side edges of the cover end flaps in supporting engagement with the said inner side wall members, said side walls and inner side wall members being provided with ventilating openings which register when the container is erected.

3. A carton comprising a bottom, side walls hingedly connected to the bottom, end walls comprising outer wall members hingedly connected to the bottom and inner end wall members extending from the outer ends of the outer end wall members, the side walls having corner flaps at their ends disposed on the inner sides of the outer end wall members when the carton is erected, the inner end wall members being folded inwardly over the corner flaps in retaining relation thereto with their ends in supporting relation to the side walls, said inner end wall members having inner side wall members on their ends positioned against the inner sides of the side walls with their bottom edges in supported engagement with the bottom, said inner side wall members being of a height corresponding approximately to the height of the side walls, the side walls being provided with inwardly foldable cover supporting top flaps on their upper edges, and a cover adapted to be positioned upon said top flaps and provided with end flaps adapted to be inserted between the ends of the top flaps and said inner end wall members with the end edges of the top flaps in supporting engagement with the inner side wall members.

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