Oct. 31, 1950

K. T. BUTTERY

2,527,702

CELLULAR CARTON

Filed Aug. 22, 1946

2 Sheets-Sheet 1

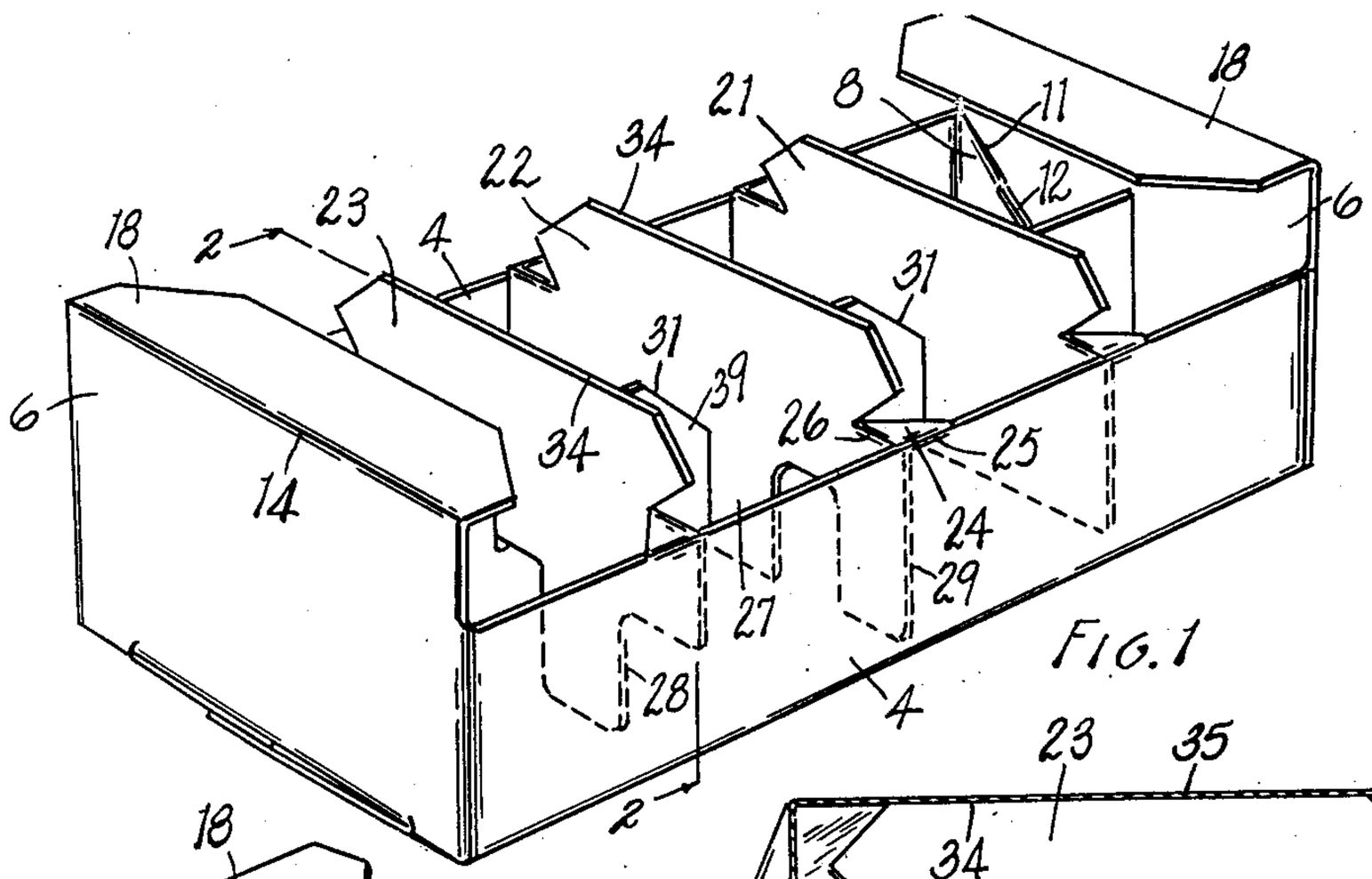

FIG. 1

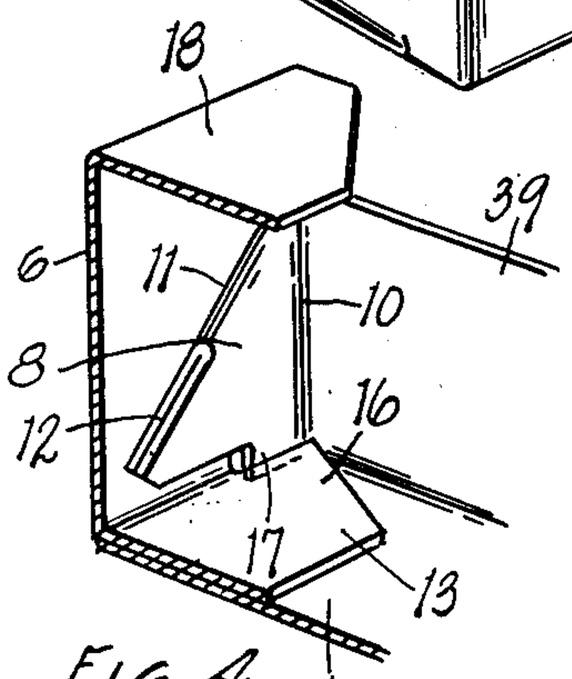

FIG. 4

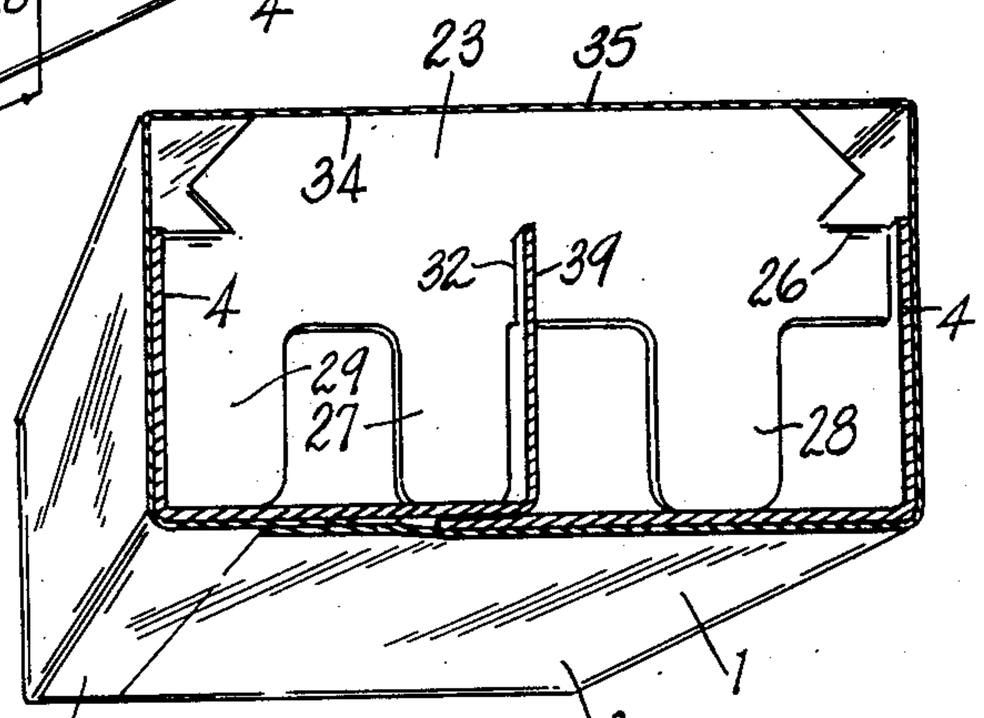

FIG. 2

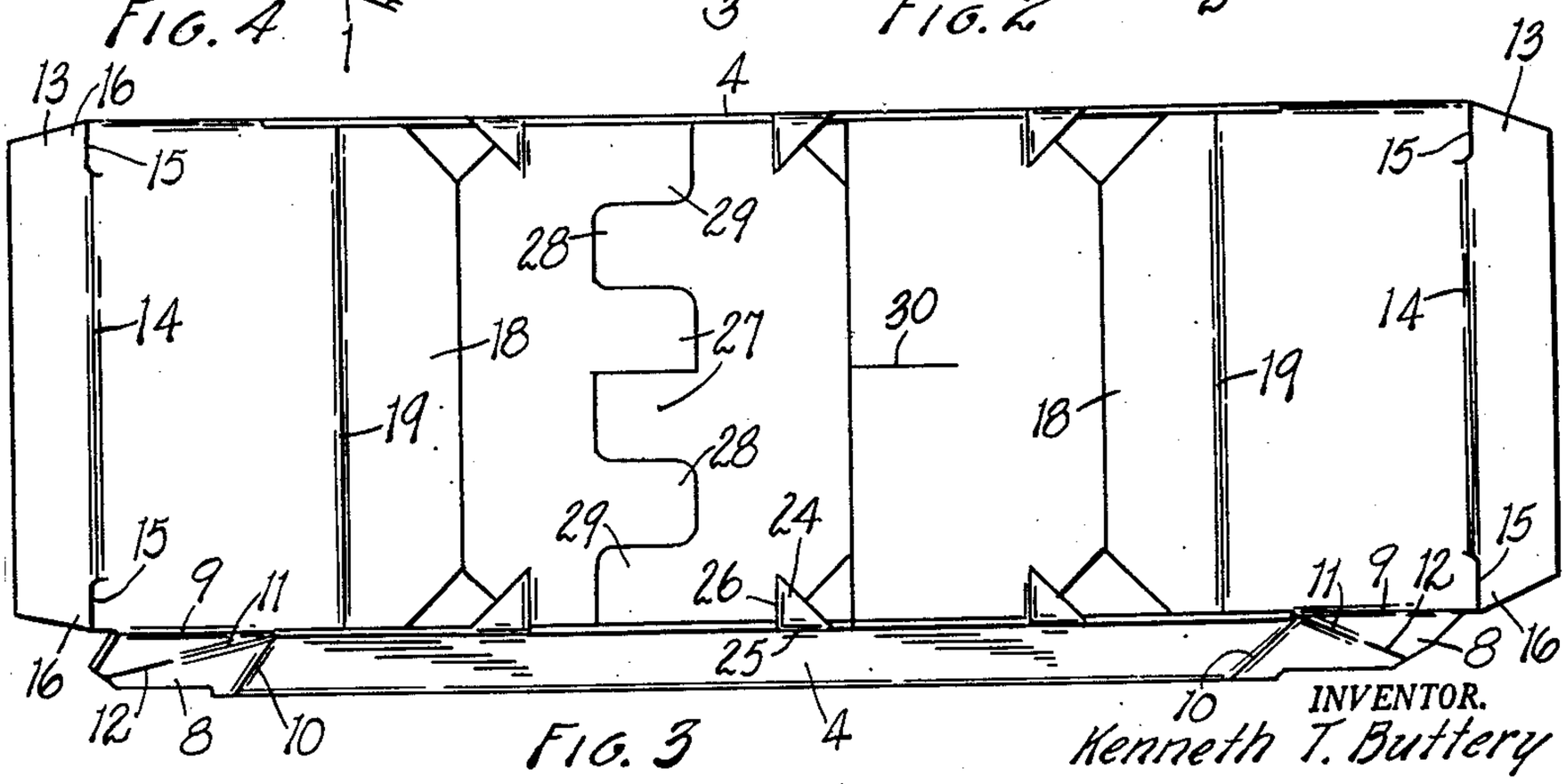

FIG. 3

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CELLULAR CARTON

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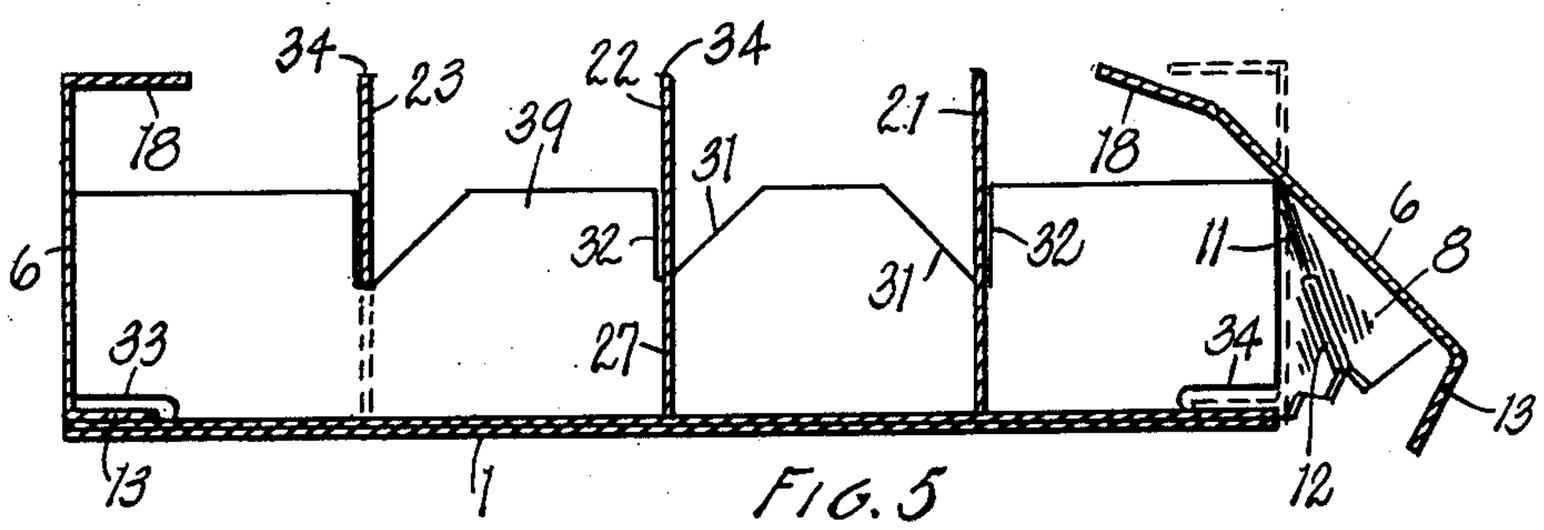

FIG. 5

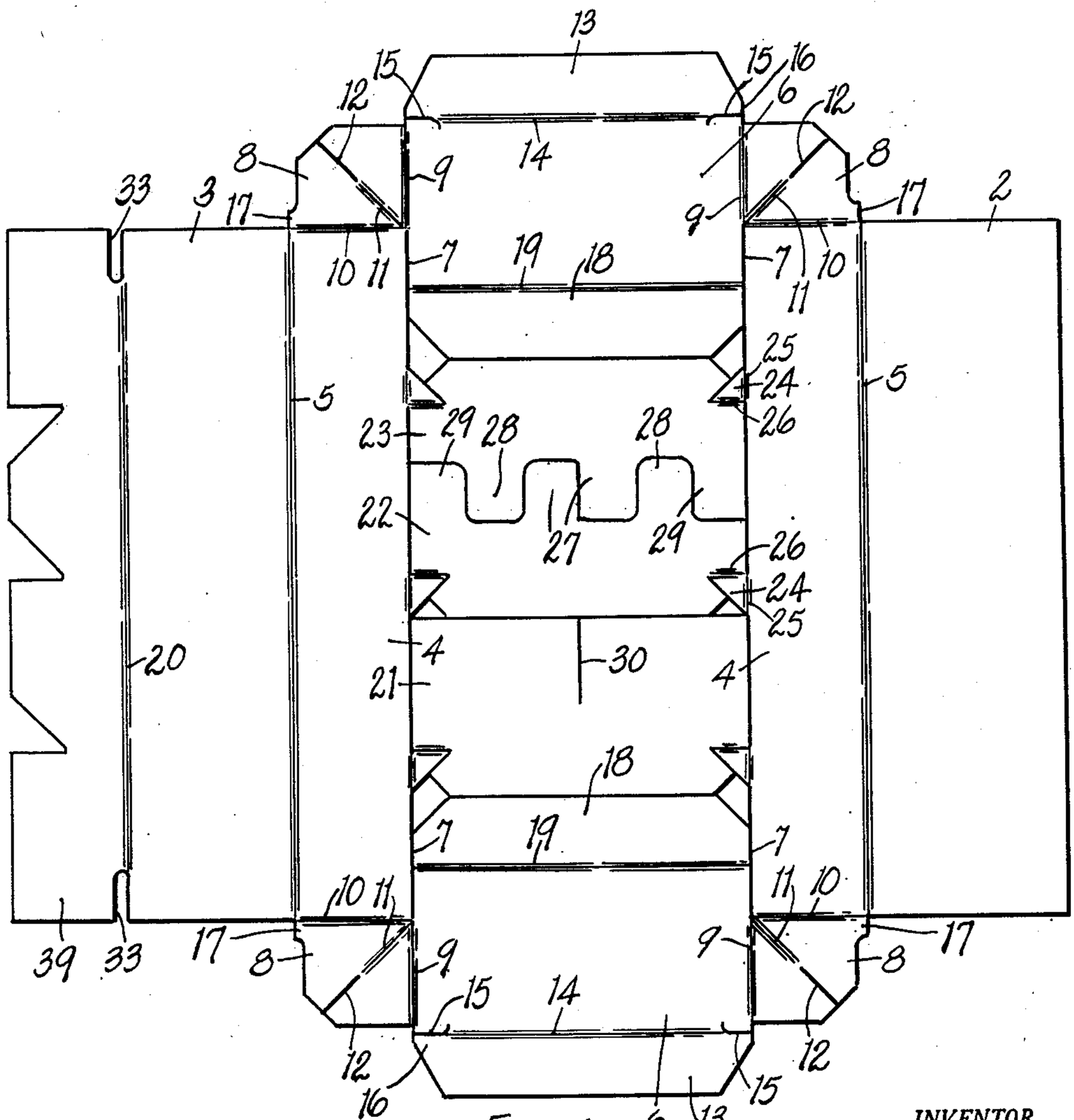

FIG. 6

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CELLULAR CARTON

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Application August 22, 1946, Serial No. 692,194

10 Claims. (Cl. 229—28)

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This invention relates to improvements in cellular cartons.

The main objects of this invention are:

First, to provide a cellular carton or box which may be formed of a single blank with a minimum of stock and waste or scrap and one in which the parts are so associated that the carton may be quickly set up or erected and one which when set up is quite rigid even when formed of relatively light stock.

Second, to provide a box or carton well adapted for the effective display of merchandise disposed therein and at the same time, one in which the merchandise is effectively enclosed and protected.

Third, to provide a carton or box having these advantages which is attractive in appearance when erected and with the merchandise or contents arranged therein.

Further objects relating to details and economies of the invention will appear from the description to follow. The invention is defined in the claims.

An embodiment of the invention is illustrated in the accompanying drawings in which:

Fig. 1 is a perspective view of a carton embodying my invention fully set up.

Fig. 2 is an enlarged transverse section on a line corresponding to line 2—2 of Fig. 1.

Fig. 3 is a top perspective view of the carton partially erected.

Fig. 4 is a fragmentary perspective view partially in longitudinal section.

Fig. 5 is a view in longitudinal section illustrating steps in the erecting of the carton, one end wall being illustrated in partially erected position by full lines and erected position by dotted lines.

Fig. 6 is a plan view of the blank.

The embodiment of my invention illustrated is formed of a single blank and comprises a bottom designated generally by the numeral 1 made up of bottom members or sections 2 and 3. The side walls 4 are hingedly joined to the inner edges of the bottom members as they lie in the blank by the hinging scores 5, the hinging scores 5 being at the bottoms of the side walls and outer edges of the bottom members when the carton is erected. The end walls 6 are disposed within the inner edges of the side walls as viewed in the blank and separated from their inner edges by the slits 7. The ends of the end walls and the ends of the side walls are connected by the corner members 8 which are hingedly secured to the end walls at 9 and to the side walls at 10 and have diagonal folding scores 11 and slits 12 aligning therewith. These corner members are folded on the inner sides of the end walls when the carton is erected as is most clearly shown in Fig. 4.

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The end walls have tucking flaps 13 at their bottom edges, these being joined thereto by the hinging scores 14, these being slits 15 at the ends of these hinging scores. These slits form locking tongues 16 adapted to engage with the locking lugs 17 when the tucking flaps are tucked under the infolded corner members as is clearly shown in Fig. 4. The end walls 6 are desirably of a width substantially exceeding the width of the side walls so that the end walls when erected extend substantially above the side walls to provide wrapper supports and to expose the contents at the sides of the carton. The end walls have inturned wrapper supporting flaps 18 joined thereto by the hinging scores 19. The bottom wall member 2 is at one end of the blank, a longitudinal partition member 19 being at the other end of the blank and hingedly joined to the bottom member 3 by the hinging scores 20. The bottom members 2 and 3 are overlapped and adhesively secured with the member 3 uppermost, the longitudinal partition member lying on the bottom when the carton is collapsed but being hingedly secured thereto so that it may be swung to an upright position when the carton is erected.

The blank is scored and slit to provide transverse partition members, there being three of them 21, 22 and 23, in the structure illustrated. The transverse partitions are hingedly connected to the upper edges of the side walls by the hinge members 24 which are hingedly connected to the side walls at 25, the partition members being hingedly connected to the hinge members at 26. It will be noted that the transverse partitions 22 and 23 are arranged to be swung oppositely in erecting and collapsing the same and they are cut on their lower edges to provide tongues 27, 28 and 29. It will be understood that the number of tongues would be varied according to the width of the carton, the tongues providing transverse partition members which extend to the bottom of the carton. When the transverse partition members 22 and 23 are erected the inner edges of their tongues 27 supportingly engage opposite sides of the longitudinal partition. The transverse partition 21 has a slit 30 extending from its bottom edge, this slit being adapted to receive the longitudinal partition and the edges of the slit closely embracing the longitudinal partition and providing an effective lateral support therefor.

The longitudinal partition is provided with notches 31 in its upper edge adapted to receive

the transverse partitions, these notches being conformed to provide stops **32** to limit the swing of the transverse partition to an upright position. The longitudinal partition is notched at **33** to receive the tucking flaps **18**. In the embodiment illustrated, the upper edges **34** of the transverse partitions are substantially in the plane of the wrapper supporting flaps **13** of the end walls so that they coact therewith in supporting a wrapper as shown at **35** in Fig. 2.

With this arrangement of parts I provide a double row cell carton, the contents of both rows of cells being effectively displayed through the transparent wrapper and at the same time effectively protected. The carton when erected is strong and rigid even when formed of quite light stock. The side walls of the carton are effectively supported so that they are not likely to be collapsed inwardly upon the contents which may be quite delicate, such as certain bakery products or such as might be injured by squeezing. It will be understood that it is quite a general practice for prospective customers to pick up the package for closer inspection and they are not likely to be very careful in the handling of the package. However, as stated, the contents of the carton are well protected.

I have illustrated and described my invention in a practical commercial embodiment thereof. I have not attempted to illustrate or describe certain embodiments or adaptations which might be desirable in the matter of size or the number of cells for the merchandising of various products, as it is believed that this disclosure will enable those skilled in the art to adapt or embody 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 collapsible cellular carton formed of a single blank cut and scored to provide hingedly connected bottom, side, and end walls, and longitudinal and transverse partition members, the bottom comprising bottom members one of which is disposed at one end of the blank, the longitudinal partition member being at the other end of the blank, the other bottom member being hingedly connected to the longitudinal partition member, the side walls being hingedly connected in the blank to the inner edges of the bottom members, the bottom members being overlapped and secured together with the longitudinal partition member above the bottom and hingedly connected thereto centrally thereof, the ends of the side and end walls being connected by foldable corner members foldable upon the inner sides of the end walls, the end walls being of a greater width than the side walls and having tucking flaps at their bottom edges adapted to be inserted between the bottom and the folded corner members, the longitudinal partition member being slotted at its ends to receive said end wall tucking flaps, the end walls having wrapper-supporting flaps on their upper edges, the transverse partition members being hingedly connected to the upper edges of the side walls and having portions thereof projecting above the side walls, the upper edges when erected being in approximately the plane of the wrapper-supporting flaps of the end walls to coact therewith in supporting a wrapper, one pair of adjacent transverse partition members being adapted to swing oppositely on their hinge connections to the side walls, and having tongue-like extensions on lower edges which interlap when the transverse partitions are in collapsed position, another transverse partition member being slit centrally from its bottom edge to receive said longitudinal partition member, said longitudinal partition being notched on its upper edge to receive the transverse partition members when they are in erected position, the notches being formed to provide stops for the transverse partition members, the inner tongues of said adjacent pair of transverse partition members being adapted to engage opposite sides of the longitudinal partition to laterally support the same in erected position.

2. A collapsible cellular carton formed of a single blank cut and scored to provide hingedly connected bottom, side, and end walls, and longitudinal and transverse partition members, the bottom comprising bottom members one of which is disposed at one end of the blank, the longitudinal partition member being at the other end of the blank, the other bottom member being hingedly connected to the longitudinal partition member, the side walls being hingedly connected in the blank to the inner edges of the bottom members, the bottom members being overlapped and secured together with the longitudinal partition member above the bottom and hingedly connected thereto centrally thereof, the ends of the side and end walls being connected by foldable corner members foldable upon the inner sides of the end walls, the end walls having tucking flaps at their bottom edges adapted to be inserted between the bottom and the folded corner members, the transverse partition members being hingedly connected to the upper edges of the side walls, one pair of adjacent transverse partition members being adapted to swing oppositely on their hinge connections to the side walls, and having tongue-like extensions on their lower edges which interlap when the transverse partitions are in collapsed position, another transverse partition member being slit centrally from its bottom edge to receive said longitudinal partition member, said longitudinal partition being notched on its upper edge to receive the transverse partition members when they are in erected position, the notches being formed to provide stops for the transverse partition members, the inner tongues of said adjacent pair of transverse partition members being adapted to engage opposite sides of the longitudinal partition to laterally support the same in erected position.

3. A collapsible cellular carton formed of a single blank cut and scored to provide hingedly connected bottom, side, and end walls, and longitudinal and transverse partition members, the bottom comprising bottom members one of which is disposed at one end of the blank, the longitudinal partition member being at the other end of the blank, the other bottom member being hingedly connected to the longitudinal partition member, the side walls being hingedly connected in the blank, to the inner edges of the bottom members, the bottom members being overlapped and secured together with the longitudinal partition member above the bottom and hingedly connected thereto centrally thereof, the ends of the side and end walls being connected by foldable corner members foldable upon the inner sides of the end walls, the end walls having tucking flaps at their bottom edges adapted to be inserted between the bottom and the folded corner members, said end walls in the erected carton having portions thereof projecting above the side walls, said end wall portions in the blank be-

ing disposed between the inner edges of the side walls, wrapper supporting flaps projecting inwardly towards each other from the upper edges of said end wall projecting portions, the longitudinal partition member being slotted at its ends to receive said end wall tucking flaps, the transverse partition members being hingedly connected to the upper edges of the side walls and having portions thereof projecting above the side walls, the upper edges when erected being in approximately the plane of the wrapper-supporting flaps of the end walls to coact therewith in supporting a wrapper, the transverse partition members being adapted when erected to supportingly engage said longitudinal partition member, said longitudinal partition being notched on its upper edge to receive the transverse partition members when they are in erected position, the notches being formed to provide stops for the transverse partition members.

4. A collapsible cellular carton formed of a single blank cut and scored to provide hingedly connected bottom, side, and end walls, and longitudinal and transverse partition members, the bottom comprising bottom members one of which is disposed at one end of the blank, the longitudinal partition member being at the other end of the blank, the other bottom member being hingedly connected to the longitudinal partition member, the side walls being hingedly connected in the blank to the inner edges of the bottom members, the bottom members being overlapped and secured together with the longitudinal partition member above the bottom and hingedly connected thereto centrally thereof, the ends of the side and end walls being connected by diagonally foldable corner members foldable upon the inner sides of the end walls, the diagonal folding lines of the corner members extending downwardly from the ends of the upper edges of the side walls in the erected carton, the end walls having tucking flaps at their bottom edges adapted to be inserted between the bottom and the folded corner members, the longitudinal partition member being slotted at its ends to receive said end wall tucking flaps, the transverse partition members being hingedly connected to the upper edges of the side walls, the transverse partition members being adapted when erected to supportingly engage said longitudinal partition member, said longitudinal partition being notched on its upper edge to receive the transverse partition members when they are in erected position, the notches being formed to provide stops for the transverse partition members.

5. A collapsible cellular carton formed of a single blank cut and scored to provide hingedly connected bottom, side, and end walls, and longitudinal and transverse partition members, the bottom comprising bottom members one of which is disposed at one end of the blank, the longitudinal partition member being at the other end of the blank, the other bottom member being hingedly connected to the longitudinal partition member, the side walls being hingedly connected in the blank one to the inner edges of each of the bottom members, the bottom members being overlapped and secured together with the longitudinal partition member above the bottom and hingedly connected thereto centrally thereof, the ends of the side and end walls being connected by diagonally foldable corner members foldable upon the inner sides of the end walls, the diagonal folding lines of the corner members extending downwardly from the ends of the upper edges of the side walls in the erected carton, the end walls having tucking flaps at their bottom edges adapted to be inserted between the bottom and the folded corner members, said tucking flaps having end portions thereof engaging the inner sides of the diagonally foldable corner members adjacent the hinge connections of said corner members to the side walls to lock said tucking flaps against withdrawal from beneath said corner members and to lock said corner members in folded condition against the end walls, the transverse partition members being hingedly connected to the upper edges of the side walls, the transverse partition members being adapted when erected to supportingly engage said longitudinal partition member.

6. A collapsible cellular carton comprising hingedly connected bottom and side end walls, and foldable corner members connecting the ends of the side and end wall, and longitudinal and transverse partitions, the bottom comprising bottom members overlapped and secured together with the longitudinal partition hingedly connected to the inner edge of the upper bottom member, the side walls being hingedly connected to the outer edges of the bottom members, the corner members being foldable upon the inner sides of the end walls, the end walls having tucking flaps at their bottom edges adapted to be inserted between the bottom and the folded corner members, the longitudinal partition being slotted at its ends to receive said end wall tucking flaps, the end walls having wrapper-supporting flaps on their upper edges, the transverse partitions being hingedly connected to the upper edges of the side walls and having portions thereof projecting above the side walls, one pair of adjacent transverse partitions being adapted to swing oppositely on their hinge connections to the side walls, and having tongue-like extensions on their lower edges which interlap when the transverse partitions are in collapsed position, another transverse partition member being slit centrally from its bottom edge to receive said longitudinal partition and provide lateral support therefor, said longitudinal partition being notched on its upper edge to receive the transverse partition members when they are in erected position, the notches being conformed to provide stops for the transverse partition members, the inner tongue of said adjacent pair of transverse partitions being adapted to engage opposite sides of the longitudinal partition to laterally support the same in erected position.

7. A collapsible cellular carton comprising hingedly connected bottom and side and end walls, and foldable corner members connecting the ends of the side and end wall, and longitudinal and transverse partitions, the bottom comprising bottom members overlapped and secured together with the logitudinal partition hingedly connected to the inner edge of the upper bottom member, the side walls being hingedly connected to the outer edges of the bottom members, the corner members being foldable upon the inner sides of the end walls, the end walls having tucking flaps at their bottom edges adapted to be inserted between the bottom and the folded corner members, the transverse partitions being hingedly connected to the upper edges of the side walls, one pair of adjacent transverse partitions being adapted to swing oppositely on their hinge connections to the side walls, and having tongue-like extensions on their lower edges which interlap when the transverse partitions are in col-

lapsed position, another transverse partition member being slit centrally from its bottom edge to receive said longitudinal partition and provide lateral support therefor, said longitudinal partition being notched on its upper edge to receive the transverse partition members when they are in erected position, the notches being conformed to provide stops for the transverse partition members, the inner tongues of said adjacent pair of transverse partitions being adapted to engage opposite sides of the longitudinal partition to laterally support the same in erected position.

8. A collapsible cellular carton comprising hingedly connected bottom and side and end walls, and foldable corner members connecting the ends of the side and end wall, and longitudinal and transverse partitions, the bottom comprising bottom members overlapped and secured together with the longitudinal partition hingedly connected to the inner edge of the upper bottom member, the side walls being hingedly connected to the outer edges of the bottom members, the corner members foldable upon the inner sides of the end walls, the end walls having tucking flaps at their bottom edges adapted to be inserted between the bottom and the folded corner members, said end walls in the erected carton having portions thereof projecting above the side walls, said end wall portions in the blank being disposed between the inner edges of the side walls, the transverse partitions being hingedly connected to the upper edges of the side walls and having portions thereof projecting above the side walls, at least one of the transverse partitions being adapted when erected to supportingly engage the longitudinal partition, said longitudinal partition being notched on its upper edge to receive the transverse partition members when they are in erected position, the notches being conformed to provide stops for the transverse partition members.

9. A collapsible cellular carton comprising hingedly connected bottom and side and end walls, and diagonally foldable corner members connecting the ends of the side and end wall, and longitudinal and transverse partitions, the bottom comprising bottom members overlapped and secured together with the longitudinal partition hingedly connected to the inner edge of the upper bottom member, the side walls being hingedly connected to the outer edges of the bottom members, the corner members foldable upon the inner sides of the end walls, the diagonal folding lines of the corner members extending downwardly from the ends of the upper edges of the side walls in the erected carton, the end walls having tucking flaps at their bottom edges adapted to be inserted between the bottom and the folded corner members, the longitudinal partition being slotted at its ends to receive said end wall tucking flaps, the transverse partitions being hingedly connected to the upper edges of the side walls, at least one of the transverse partitions being adapted when erected to supportingly engage the longitudinal partition, said longitudinal partition being notched on its upper edge to receive the transverse partition members when they are in erected position, the notches being conformed to provide stops for the transverse partition members.

10. A collapsible cellular carton comprising hingedly connected bottom and side and end walls, and diagonally foldable corner members hingedly connected to the ends of the side walls and the ends of the end walls and constituting the sole connection therefor, and longitudinal and transverse partitions, the bottom comprising bottom members overlapped and secured together with the longitudinal partition hingedly connected to the inner edge of the upper bottom member, the side walls being hingedly connected to the outer edges of the bottom members, the corner members foldable upon the inner sides of the end walls, the diagonal folding lines of the corner members extending downwardly from the ends of the upper edges of the side walls in the erected carton, the end walls having tucking flaps at their bottom edges adapted to be inserted between the bottom and the folded corner members, said tucking flaps having end portions thereof engaging the inner sides of the diagonally foldable corner members adjacent the hinge connections of said corner members to the side walls to lock said tucking flaps against withdrawal from beneath said corner members and to lock said corner members in folded condition against the end walls, the transverse partitions being hingedly connected to the upper edges of the side walls, at least one of the transverse partitions being adapted when erected to supportingly engage the longitudinal partition.

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