

- [54] **BOOK CARTON**
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- [52] U.S. Cl. **229/40, 206/46 FR, 229/39 B**
- [51] Int. Cl. **B65d 5/02**
- [58] Field of Search 229/40, 39 B; 206/46 FR

3,110,435 11/1963 Layne 229/40
3,325,964 6/1967 Boitel 229/40 X
3,722,783 3/1973 Rous 229/40

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Assistant Examiner—Stephen P. Garbe
Attorney, Agent, or Firm—Darby & Darby

[57] **ABSTRACT**

A carton for packaging an article is formed from a single piece blank and includes a bottom wall and two inner end flaps which are hingedly connected to the bottom wall. A pair of areas each having at least two parallel sides are formed in contiguous portions of the bottom wall and the inner end flaps of the carton. In the erected carton these areas form buttresses which permit a reinforced air cushion to be formed about the packaged article.

13 Claims, 14 Drawing Figures

[56] **References Cited**
UNITED STATES PATENTS

2,070,949 1/1959 Currivan 229/39 B
3,035,751 5/1962 Brown 229/39 B

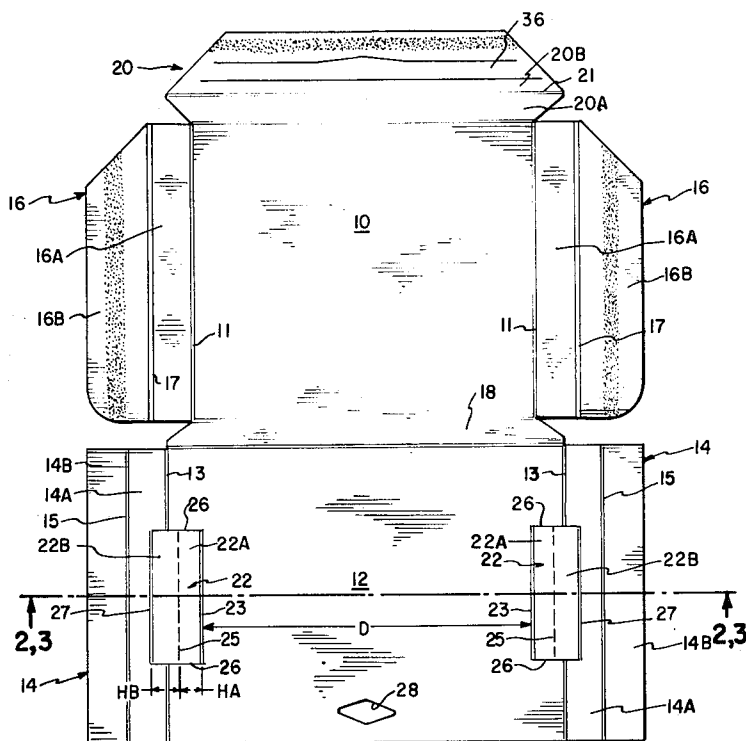


FIG. 1

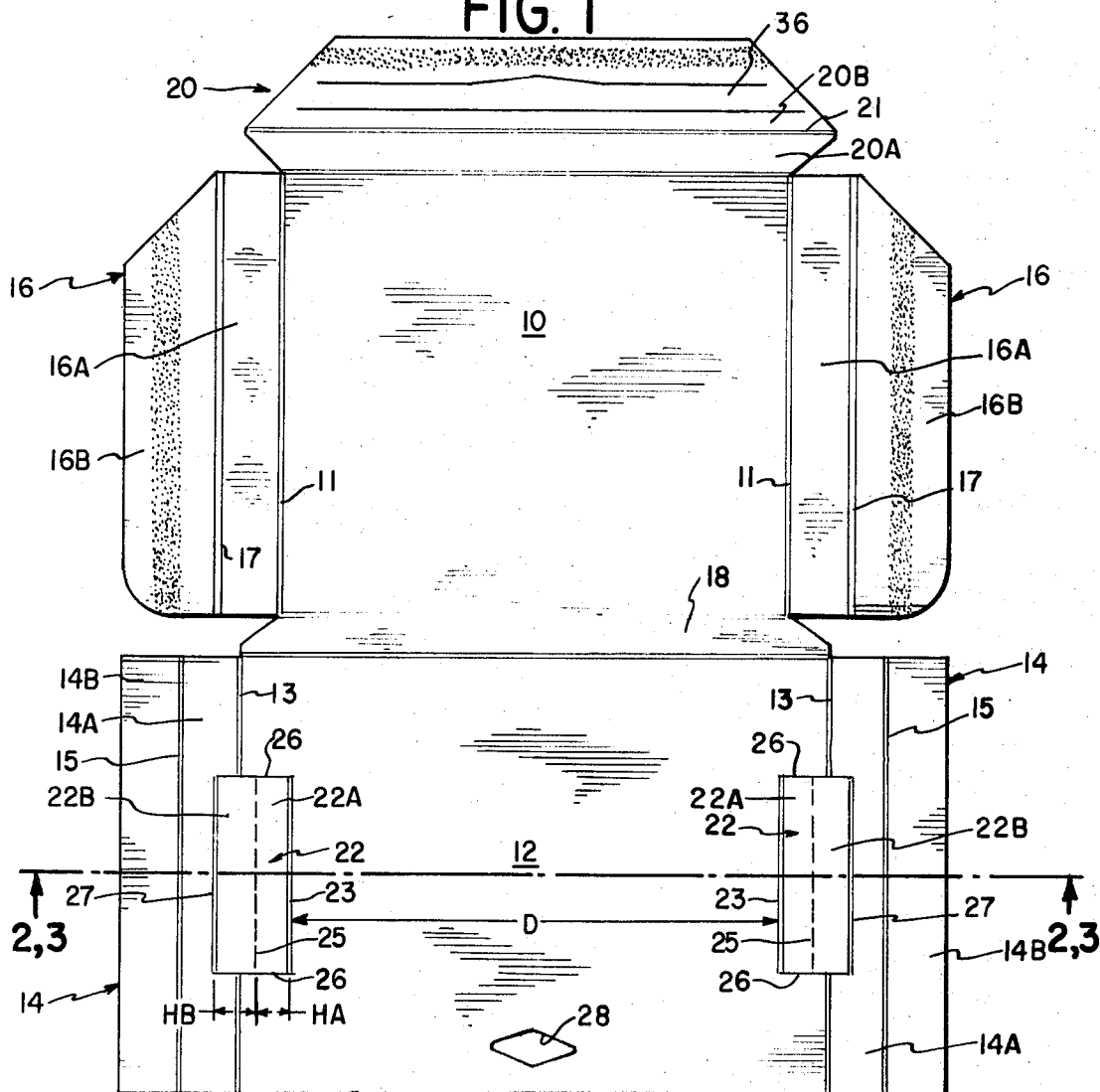


FIG. 2

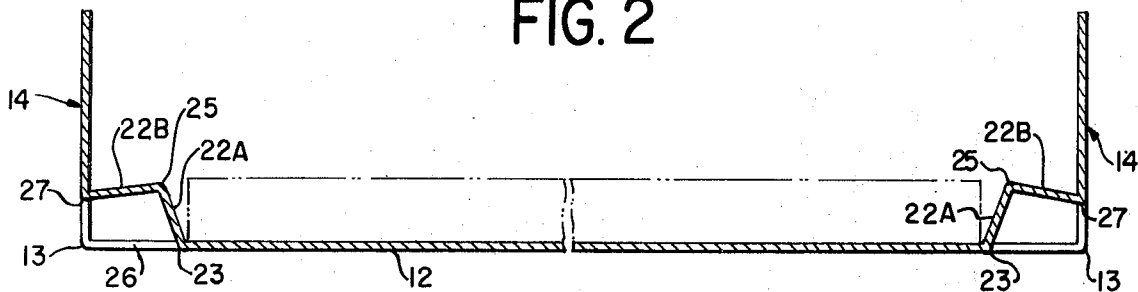


FIG. 3

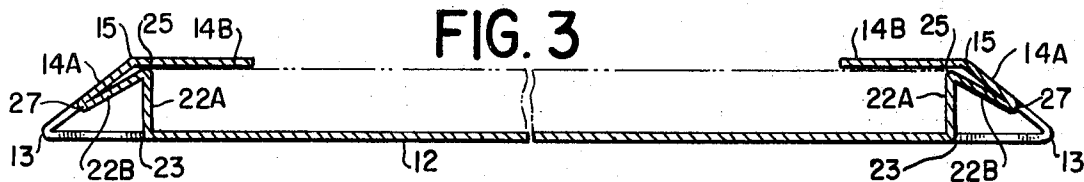


FIG. 4

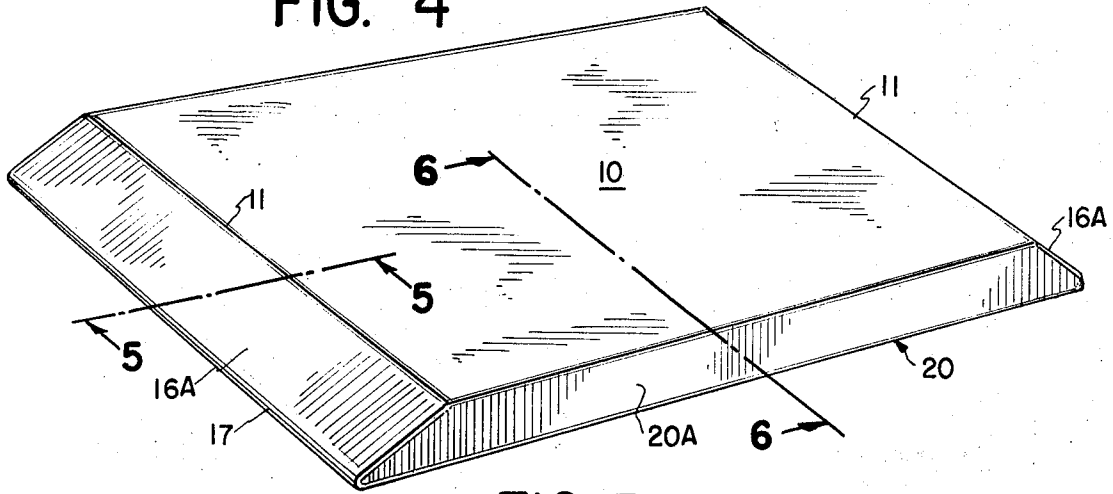


FIG. 5

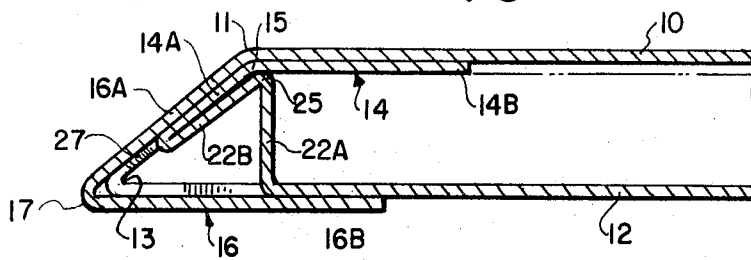


FIG. 6

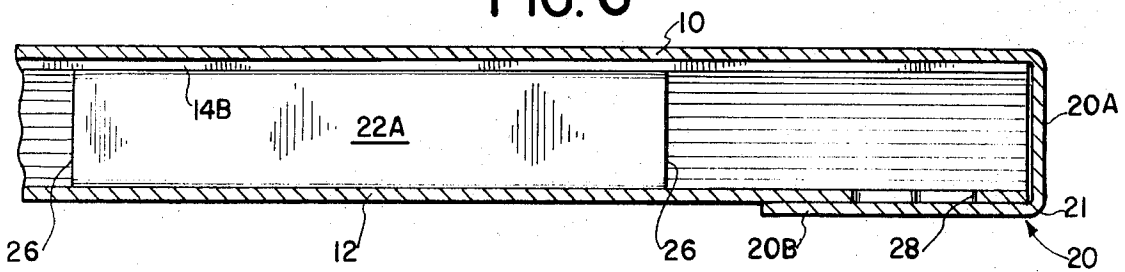


FIG. 10

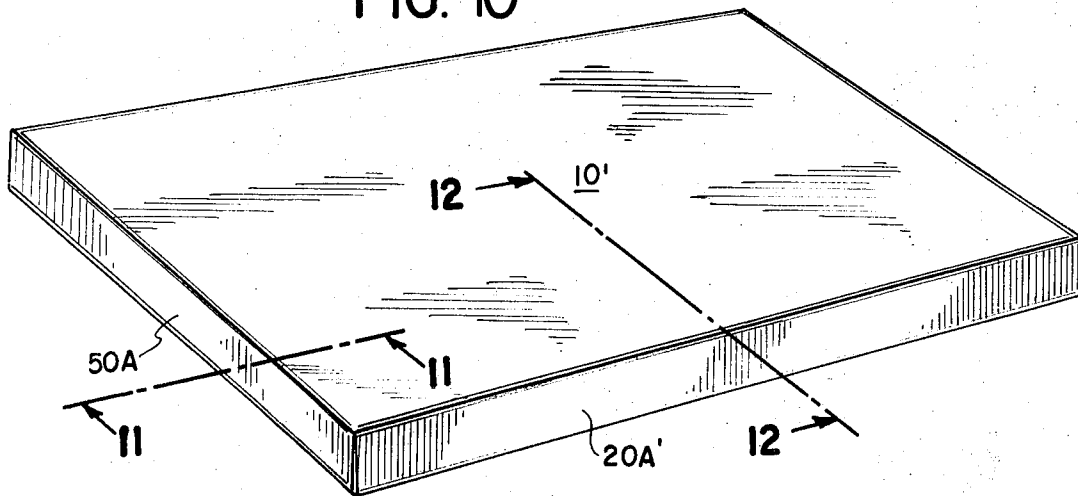


FIG. 11

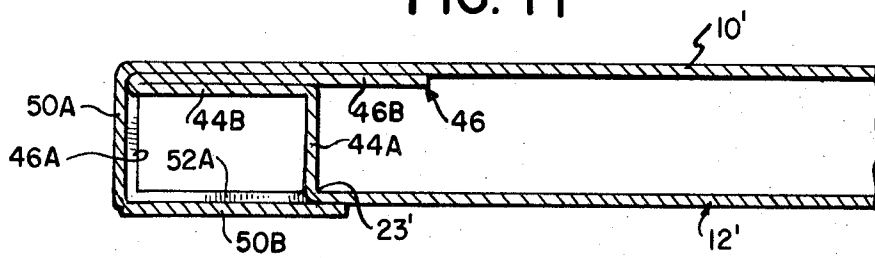
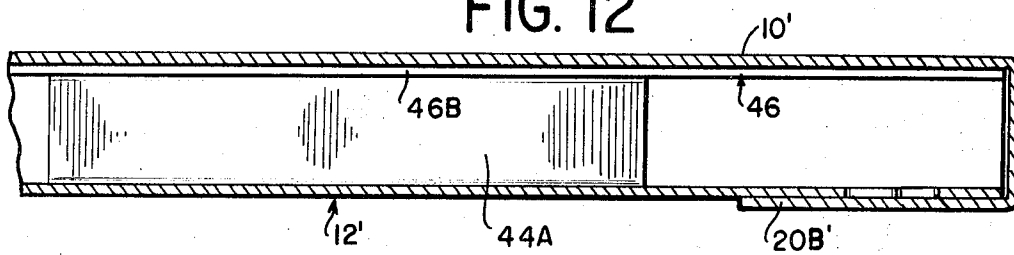


FIG. 12



BOOK CARTON

In the carton packaging industry, it is conventional to provide tubular bumpers about the periphery of the carton to protect the contents of the carton from injury during shipment. The hollow bumpers, which are often constructed from the side flaps of the carton blanks, form air cells or cushions about the periphery of the article to protect the article against damage if the carton is dropped or bumped on its sides and corners.

However, the formation of tubular bumpers on a carton blank is often time-consuming and expensive, since the carton blanks are either shipped to the ultimate user with the tubular bumpers already glued (thereby increasing shipping space and costs) or they are shipped in a substantially flat position and the tubular bumpers must be erected by the ultimate user, either manually (which is time-consuming) or with expensive machinery. Further adding to the cost of erecting tubular bumpers on cartons, is the increased use of material in the construction of the carton blank since additional material must be used to form the tubular bumpers.

The cartons described in U.S. patent application Ser. No. 238,634, now U.S. Pat. No. 3,722,783, filed Mar. 27, 1972 and having the same assignee as this patent application, provide a reinforced air cushion about at least two sides of the packaged article and are relatively easy and inexpensive to manufacture and erect. While those cartons are suitable for packaging books having a thickness of one inch or more, they are not as effective in the packaging and protecting of shallow books which have a thickness of seven-eighths of an inch or less or the very slim books which have a thickness of one-half of an inch.

It is accordingly an object of this invention to provide a carton for packaging a shallow or a thin book which is relatively easy and inexpensive to manufacture and erect, and which provides a reinforced air cushion about at least two sides of the article.

It is a further object of this invention to provide a carton for packaging a shallow or thin book which automatically positions the book centrally of the carton air cushion and which holds the article in that position.

It is a further object of this invention to provide a carton with a reinforced air cushion which is adapted for use with high speed carton erecting and article inserting machinery.

The carton of the invention described herein essentially consists of a top and bottom wall; a pair of inner end flaps hingedly connected to the end edges of the bottom wall; a pair of outer end flaps hingedly connected to the end edges of the top wall and adapted to overlap the inner end flaps; a side wall, one edge of which is hingedly connected to the side edge of the bottom wall and the other edge of which is hingedly connected to the side edge of the top wall; and a side flap which is hingedly connected to the other side edge of the top wall. In the preferred embodiment of this invention, the inner end flaps of the erected carton form an acute angle with the bottom wall of the carton. In the alternate embodiment, the inner end flaps of the erected carton are perpendicular to the bottom wall of the carton.

A pair of areas, each being defined by at least two parallel sides, are formed in contiguous portions of the bottom wall and inner end flaps of the carton blank. One parallel side of each area is hingedly connected to

the carton bottom wall along a score line. The other parallel side of each area is hingedly connected to an inner end flap of the carton along a score line. The other two sides of each area are defined by cut lines through the bottom wall and the inner end flaps.

A central score line is formed in each area. The score line which is parallel to the parallel sides of the area is positioned inwardly (with respect to the central axis of the carton blank) from the axis of rotation of the inner end flap, that is, the line of hinged connection between the inner end flap and the carton bottom wall. The parallel side of each area which is hingedly connected to the carton bottom wall is positioned further inwardly from the axis of rotation of the inner end flap. On the other hand, the parallel side of each area which is hingedly connected to an inner end flap of the carton is positioned outwardly from the axis of rotation of the inner end flap.

Each inner end flap is divided into an inner portion (nearer the central axis of the carton blank) and an outer portion. A score line separates the two portions. In the preferred embodiment of this invention, the parallel side of each area which is hingedly connected to the inner side flap is spaced inwardly from the score line between the inner and outer portions of the inner end flap. In the alternate embodiment, the parallel side of each area which is hingedly connected to the inner side flap is directly adjacent the score line between the inner and outer portions of the inner end flap.

Thus, in the preferred embodiment of the erected carton, the inner area portion extends vertically from the bottom wall of the carton and the outer area portion forms an acute angle with the inner area portion. A portion of the inner end flap doubles over the outer area portion so as to form a triangular air cushion about two sides of the carton.

Similarly, in the alternate embodiment of the erected carton, the inner area portion extends vertically from the bottom wall of the carton. However, the outer area portion is perpendicular to the area inner portion so that it is parallel to the carton bottom wall. The outer portion of the inner end flap overlaps the outer area portion so as to form a rectangular air cushion about two sides of the carton.

In both embodiments of this invention, the height or thickness of the inner area portion is approximately equal to the thickness of the book or article to be packaged. Furthermore, in both embodiments, the distance between inner parallel sides of the pair of areas is approximately equal to the length of the book or article to be packaged. Thus, in the erected carton of both embodiments, the vertically extending inner area portion engages the end edges of the article to be packaged and prevents it from shifting within the carton.

These and other objects and features of this invention will be more readily understood and appreciated by reference to the following descriptions and drawings, of which:

FIG. 1 is an enlarged plan view of a non-erected carton blank, showing the preferred embodiment of this invention;

FIG. 2 is a front view of a partially erected portion of the carton blank which is illustrated in FIG. 1;

FIG. 3 is a front view of a partially erected portion of the carton blank which is illustrated in FIG. 1;

FIG. 4 is a perspective view of the erected carton which is illustrated unerected in FIG. 1;

FIG. 5 is a cross-sectional view of the carton illustrated in FIG. 5, taken along the line 5—5;

FIG. 6 is a cross-sectional view of the carton illustrated in FIG. 4 taken along the line 6—6;

FIG. 7 is an enlarged plan view of a non-erected carton blank showing an alternate embodiment of this invention;

FIG. 8 is a front view of a partially erected portion of the carton blank which is illustrated in FIG. 7;

FIG. 9 is a front view of a partially erected portion of the carton blank which is illustrated in FIG. 7;

FIG. 10 is a perspective view of the erected carton which is illustrated unerected in FIG. 7;

FIG. 11 is a cross-sectional view of a portion of the carton illustrated in FIG. 10, taken along the line 11—11;

FIG. 12 is a cross-sectional view of a portion of the carton illustrated in FIG. 10, taken along the line 11—11;

FIG. 13 is an enlarged plan view of a non-erected carton blank showing a second alternate embodiment of this invention; and

FIG. 14 is a cross-sectional view of the erected carton which is illustrated unerected in FIG. 13.

Referring now to FIG. 1, the preferred embodiment of the carton of the invention described herein consists of a top wall 10 and a bottom wall 12; a pair of inner end flaps 14 which are hingedly connected to the bottom wall end edges; a pair of outer end flaps 16 which are hingedly connected to the top wall 10 and which are adapted to overlap the inner end flaps 14; a side wall 18, the upper end portion of which is hingedly connected to the top wall 10 and the lower portion of which is hingedly connected to the bottom wall 12; and a side flap 20 which is hingedly connected to the other side edge of the top wall 10.

Outer end flaps 16 are composed of an inner portion 16A and an outer portion 16B separated by score lines 17. The outer end flaps are hingedly connected to the top wall along score lines 11. Likewise inner end flaps 14 are composed of an inner portion 14A and an outer portion 14B divided by score line 15. The inner end flap 14 is hingedly connected to the bottom wall 12 along score line 13. Side flap 20 is composed of an inner portion 20A and an outer portion 20B which are separated by a partially perforated score line 21.

Areas 22 are formed partly in bottom wall 12 and partly in the inner end flap inner portion 14A. Each area 22 is composed of an inner portion 22A and an outer portion 22B which are separated by a partially perforated score line 25. The inner area portion 22A is hingedly connected to the bottom wall 12 along score line 23. The outer area portion 22B is hingedly connected to the inner end flap inner portion 14A along score line 27. Score lines 23, 25 and 27 are all parallelly aligned with one another. The other two sides of area 22 are formed by cut lines 26 which represent complete cuts through a portion of the carton bottom wall and of the inner end flap inner portion.

The distance D between the score lines 23 of the inner area portions 22A is approximately equal to the length of the article to be packaged. The thickness or height H_A of each inner area portion 22A is approximately equal to the thickness of the article to be packaged. Thus, when the inner area portions 22A are in a vertical position, they serve to hold the edges of the packaged article in place.

The height of the inner area portion 22A is less than the distance between the axes of rotation of the inner area portion and of the inner end flap, that is, the distance between score lines 13 and 25. The reason for this is so that the carton can accommodate small thickness books (determined by height or thickness of the inner area portion) and still provide an adequate size air cushion or bumper about two sides of the carton (determined by the distance between score lines 13 and 23).

The relative size or thickness of the outer area portion 22B and the inner end flap inner portion 14A determine the final shape of the air cushion or bumper in the erected carton. In the preferred embodiment, the thickness or height H_B of the area outer portion 22B extends from the partially perforated area score line 25 to the score line 27. Since score line 27 is spaced inwardly from score line 15 which separates the inner and outer portions 14A and 14B of inner end flap 14, and since the thickness or height of the inner end flap inner portion 14A is greater than the height of the area inner portion 22A, the air cushion in the preferred embodiment assumes a triangular shape.

Strips of glue (indicated by speckled shading in the drawings) are applied to the outer end flaps outer portions 16B and to the side flaps outer portion 20B. A tear strip 36 is also formed in the side flap outer portion 20B. A recess 28 formed in the bottom wall of the carton permits a portion of the tear strip to be pushed downwardly so that it is easier to grasp the outer portion of the tear strip and easily open the carton.

Referring now to FIGS. 2-4, the carton blank of the preferred embodiment of this invention is erected and the article is packaged in the carton in the following manner. The carton blank is first loaded onto an article-inserting and carton-erecting machine in an essentially flat position. As the carton blank is pushed forwardly along a conveyor by a conventional flight (not shown), guide bars (not shown) engage the bottom wall of the carton blank to hold it in place during the carton erecting process. The guide bars, of course, engage the bottom wall at positions which are spaced inwardly from the areas 22.

As the carton blank continues its forward progress, the inner end flaps 14 are rotated upwardly by conventional plows (not shown) simultaneously with the area central score lines 25 being pushed upwardly by a conventional cam arrangement (not shown). As the carton blank continues its forward progress, the plows continue to progressively pivot the inner end flaps upwardly about score line 13. The upward movement of the inner side flaps causes each inner area portion 22A to pivot upwardly as illustrated in FIG. 2.

When the inner end flap has been pivoted to the substantially vertical position illustrated in FIG. 2, the inner area portion 22A has not quite reached a vertical position. At this point, the article to be packaged is inserted in the carton blank. As the inner end flap continues pivoting, the inner area portion 22A reaches a substantially vertical position abutting the end edges of the packaged article. If the article was not correctly centered in the bottom wall of the blank during the article inserting operation, the movement of each inner area portion from the position illustrated in FIG. 2 to a vertical position serves to correctly position the article.

As the inner end flap continues to be pivoted about score line 13, a lengthwise portion of the inner end flap

inner portion 14A overlaps the outer area portion 22B which forms an acute angle with the inner area portion 22A. As the carton continues its forward progress, the inner end flap outer portion 14B is rotated downwardly into engagement with the top of the packaged article. This is illustrated in FIG. 3. At this point, all that remains to be done for the packaging operation to be completed is for the top cover of the carton blank to be rotated onto the packaged article and for the overlapping outer end flap outer portions 16B and the overlapping side wall outer portion 20B to be glued to the underside of the bottom wall 12. The resultant carton is illustrated in FIG. 4.

FIG. 5 illustrates the structural strength of the triangular air cushion of the carton of this embodiment of the invention. The top wall 10 of the carton directly engages the inner end flap outer portion 14B. The outer end flap inner portion 16A overlaps the inner end flap inner portion 14A so as to form a double thickness of material. Also, the outer end flap inner portion 16A overlaps the double thickness of material formed by the outer area portion 22B and the inner end flap inner portion 14A to form a triple thickness of material. The outer end flap outer portion 16B overlaps the outer bottom wall portion 12A so as to provide a double thickness of material along the base of the triangular cushion.

FIGS. 5 and 6 illustrate how the inner area portion 22A prevents the packaged article from slipping and sliding within the carton. Thus, the inner area portion 22A engages a portion of the end edge of the packaged article and prevents it from moving into the protective air cushion.

Referring now to FIG. 7, the carton blank of the alternate embodiment of this invention is illustrated. The upper portion of the carton blank is exactly the same as the upper portion of the carton blank illustrated in FIG. 1. The lower portion of the carton blank illustrated in FIG. 7 is exactly the same as the lower portion of the preferred embodiment with the exception of the relative size and positioning of the areas 44 and the inner end flaps 46. Thus, the elements illustrated in FIGS. 7 - 12 which are marked with prime numerals respond to the same description as the corresponding elements in the preferred embodiment designated by the corresponding unprimed numerals.

Areas 44 are formed partly in bottom wall 12' and partly in the inner flap inner portion 46A. Each area 44 is composed of an inner portion 44A and an outer portion 44B which are separated by a partially perforated score line 25'. The inner area portion 44A is hingedly connected to the bottom wall 12' along score line 23'. The outer area portion 44B is hingedly connected to the inner end flap inner portion 46A along score line 48.

The distance D' between the score lines 23' of the inner area portions 44A is approximately equal to the length of the article to be packaged. The thickness or height of each inner area portion 44A is approximately equal to the thickness of the article to be packaged. Thus, when the inner area portions 44A are in a vertical position, they serve to hold the end edges of the packaged article in place.

In this alternate embodiment, the thickness or height H_B' of the area outer portion 44B extends from the partially perforated area score line 25' to the score line 48. Score line 48 is positioned directly adjacent score line

15' which separates the inner and outer portions 46A and 46B of inner end flap 46. Since the thickness or height of the inner end flap inner portion 46A is approximately equal to the thickness of the inner area portion 44, and since the thickness of the area outer portion is approximately equal to the distance between score lines 23' and 13', the air cushion in the alternate embodiments assumes a rectangular shape.

The carton blank of the alternate embodiment of this invention is erected and an article is inserted and packaged in essentially the same manner as described with respect to the preferred embodiment. However, one difference resulting from the different shape of the tubular bumper is that the article to be packaged is inserted into the carton blank before the inner end wall flap 46 reaches a vertical position, since the inner end wall flap 48 and the inner area portion 44A become vertical at approximately the same time.

As illustrated in FIG. 10, the outer end walls of the erected carton are straight rather than being slanted as in the preferred embodiment.

FIG. 11 illustrates the structural strength of the rectangular air cushion of the carton of this embodiment of the invention. The top wall 10' of the carton directly engages the inner end flap outer portion 46B. The outer end flap inner portion 50A overlaps the inner flap inner portion 46A so as to form a double thickness of material. Also, a portion of the inner end flap outer portion 46B overlaps the outer area portion 44B to form a triple thickness of material. The outer end flap outer portion 50B overlaps the outer bottom wall portion 52A to provide a double thickness of material along the base of the tubular cushion. As best illustrated in FIGS. 11 and 12, the inner area portions 44A prevent the packaged article from slipping and sliding within the carton. The rectangular bumpers formed by the inner and outer end flaps 46 and 50 provide an air cushion which protects the ends of the packaged article and also provides at least a double thickness of material around the air cushion to strengthen it.

The cartons arrangement described above are most economical to produce in terms of the minimum square inch area required to provide reinforced air-cell support. The reinforcement is a result of the angular buttresses (designated areas in the unerected carton blank) that originates in the bottom wall and connects to an adjacent end wall.

Although this invention has been described in terms of a single blank carton, a double blank carton could be used in the practice of the invention.

In a second alternate embodiment of this invention, the buttresses or areas are moved outwardly from the bottom wall of the carton blank toward the inner end flaps so that the axis of rotation of each inner end flap is coincident with the line of connection between the buttress or area inner portion and the carton bottom wall. In the erected carton, the buttress or area inner portion is horizontal to the carton bottom wall and the buttress or area outer portion extends upwardly at a right angle from the area inner portion to the inner end flap outer portion, to which the area outer portion is hingedly connected.

Referring now to FIG. 13, the carton blank of the second alternate embodiment of this invention is illustrated. The upper portion of the carton blank is the same as the upper portion of the carton blank illustrated in FIG. 7. The lower portion of the carton blank

illustrated in FIG. 13 is the same as the lower portion of the first alternate embodiment with the exception of the relative positioning of the areas or buttresses 60. Thus, the elements illustrated in FIGS. 13 and 14 which are marked with double primed numerals respond to the same description as the corresponding elements in the first alternate embodiment designated by unprimed or single primed numerals.

Areas or buttresses 60 are formed completely in the inner end flaps 64. Each area 60 is composed of an inner portion 60A and an outer portion 60B which are separated by a partially perforated score line 66. The inner area portion 60A is hingedly connected to the bottom wall 62 along score line 66 which also forms the axis of rotation between inner end flap 64 and bottom wall 62. The outer area portion 60B is hingedly connected to the inner end flap outer portion 64B along score line 70.

In this second alternate embodiment, the thickness or height H_B'' of the area outer portion 60B is approximately equal to the thickness of the articles to be packaged. Thus, when the area outer portions 60B are in a vertical position, they serve to hold the end edges of the packaged article in place.

The carton blank of the second alternate embodiment of this invention is erected and an article is inserted and packaged in the same manner as described with respect to the first alternate embodiment. However, since the axis of rotation of the inner end flap is coincident with the line of hinged connection between the carton bottom wall and the area inner portion, the area inner portion doubles over the carton bottom wall and the area outer portion extends upwardly at a right angle from the area inner portion.

FIG. 14 illustrates the rectangular air cushion of the carton of this embodiment of the invention. The top wall 10'' of the carton directly engages the inner end flap outer portion 64B. The outer end flap inner portion 50A' overlaps the inner end flap inner portion 64A so as to form a double thickness of material. The outer end flap outer portion 50B' overlaps the outer bottom wall portion and the area inner portion 60A to form a triple thickness of material. The outer area portion 60B prevents the packaged article from slipping and sliding within the carton. The rectangular bumpers formed by the inner and outer end flaps provide an air cushion which protects the ends of the packaged article and also provides at least a double thickness of material around the air cushion to strengthen it.

While the embodiments of the various aspects of the invention have been shown in the drawings, it is to be understood that this disclosure is for the purpose of illustration and that various changes in shape, proportion and arrangement of parts, as well as the substitution of equivalents for those herein shown and described, may be made without departing from the spirit and scope of the invention as set forth in the appended claims.

What is claimed is:

1. A carton for packaging an article comprising: a rectangularly shaped bottom wall and top wall; a pair of first walls, each of said first walls being hingedly connected to a side edge of said bottom wall, the lines of connection between each said first wall and said bottom wall defining the axis of rotation of said first wall; a pair of areas, each of said areas being defined by at least first and second parallel sides and being divided

into an inner area portion and an outer area portion, said inner and outer area portions being divided by an area score line, said first parallel side forming a line of hinged connection between said inner area portion and said bottom wall, said second parallel side forming a line of hinged connection between said outer area portion and one of said first walls, said second parallel side being positioned outwardly from said first wall axis of rotation, at least one of said area portions forming a right angle with said bottom wall in order to prevent the article from shifting within the carton.

2. The carton recited in claim 1, said first parallel side being positioned inwardly from said first wall axis of rotation.

3. The carton recited in claim 1, said first parallel side being coincident with said first wall axis of rotation.

4. The carton recited in claim 1, said area score line being positioned inwardly from said first wall axis of rotation.

5. The carton recited in claim 1, each of said areas being further defined by a third and a fourth side, said third and fourth sides each consisting of a cutout line extending between said two parallel sides.

6. The carton recited in claim 1, each of said first walls being divided into an inner portion and an outer portion, said first wall inner and outer portions being divided by a first wall score line, said second parallel side being spaced inwardly from said first wall score line.

7. The carton recited in claim 1, each of said first walls being divided into an inner portion and an outer portion, said first wall inner and outer portions being divided by a first wall score line, said second parallel side being directly adjacent said first wall score line.

8. The carton recited in claim 6, said inner area portion extending vertically upwardly from said bottom wall, said outer area portion forming an acute angle with said inner area portion, said first wall inner portion forming an obtuse angle with said first wall outer portion thereby forming a triangular air cushion.

9. The carton recited in claim 7, said inner area portion extending vertically upwardly from said bottom wall, said outer area portion forming a right angle with said area inner portion, said first wall inner portion forming a right angle with said first wall outer portion thereby forming a rectangular air cushion.

10. A carton for packaging an article comprising: a rectangularly shaped bottom wall and top wall, a pair of first walls, each of said first walls being hingedly connected to a side edge of said bottom wall, the line of connection between each said first wall and said bottom wall defining the axis of rotation of said first wall, a pair of buttresses, each of said buttresses being defined by at least first and second parallel sides and being divided into an inner portion and an outer portion, said inner and outer buttress portions being divided by a buttress score line, said first parallel side forming a line of hinged connection between said inner buttress portion and said bottom wall, said second parallel side forming a line of hinged connection between said outer buttress portion and one of said first walls, said first parallel side being positioned inwardly from said first wall axis of rotation, said second parallel side being positioned outwardly from said first wall axis of rotation, said buttress score line being positioned inwardly from said first wall axis of rotation, each of said

first walls being divided into an inner portion and an outer portion, said first wall inner and outer portions being divided by a first wall score line, said second parallel side being spaced inwardly from said first wall score line, said buttress inner portion forming a right angle with said bottom wall, said buttress outer portion forming an acute angle with said buttress inner portion, said first wall inner portion forming an obtuse angle with said first wall outer portion thereby forming a triangular air cushion.

11. A carton for packaging an article comprising: a rectangularly shaped bottom wall and top wall, a pair of first walls, each of said first walls being hingedly connected to a side edge of said bottom wall, the lines of connection between each said first wall and said bottom wall defining the axis of rotation of said first wall, a pair of buttresses, each of said buttresses being defined by at least first and second parallel sides and being divided into an inner portion and an outer portion, said inner and outer buttress portions being divided by a buttress score line, said first parallel side forming a line of hinged connection between said inner buttress portion and said bottom wall, said second parallel side forming a line of hinged connection between said outer buttress portion and one of said first walls, said first parallel side being positioned inwardly from said first wall axis of rotation, said second parallel side being positioned outwardly from said first wall axis of rotation, said buttress score line being positioned inwardly from said first wall axis of rotation, each of said first walls being divided into an inner portion and an outer portion, said first wall inner and outer portions being divided by a first wall score line, said second parallel side being directly adjacent said first wall score line, said buttress inner portion forming a right angle

with said bottom wall, said buttress outer portion forming a right angle with said buttress inner portion, said first wall inner portion forming a right angle with said first wall outer portion thereby forming a rectangular air cushion.

12. A carton for packaging an article comprising: a rectangularly shaped bottom wall and top wall, a pair of first walls, each of said first walls being hingedly connected to a side edge of said bottom wall, the lines of connection between each said first wall and said bottom wall defining the axis of rotation of said first wall, a pair of buttresses, each of said buttresses being defined by at least first and second parallel sides and being divided into an inner portion and an outer portion, said inner and outer buttress portions being divided by a buttress score line, said first parallel side forming a line of hinged connection between said inner buttress portion and said bottom wall, said second parallel side forming a line of hinged connection between said outer buttress portion and one of said first walls, said first parallel side being coincident with said first wall axis of rotation, each of said first walls being divided into an inner portion and an outer portion, said first wall inner and outer portions being divided by a first wall score line, said second parallel side being positioned outwardly from said first wall score line, said buttress inner portion being parallel to said bottom wall, said buttress outer portion forming a right angle with said bottom wall, said first wall inner portion forming a right angle with said first wall outer portion thereby forming a rectangular air cushion.

13. The carton recited in claim 1, at least one of said area portions being generally equal in height to the height of the article.

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