

April 4, 1944.

C. B. BISHOP

2,346,003

COLLAPSIBLE CARTON

Filed July 2, 1942

2 Sheets-Sheet 1

Fig. 1

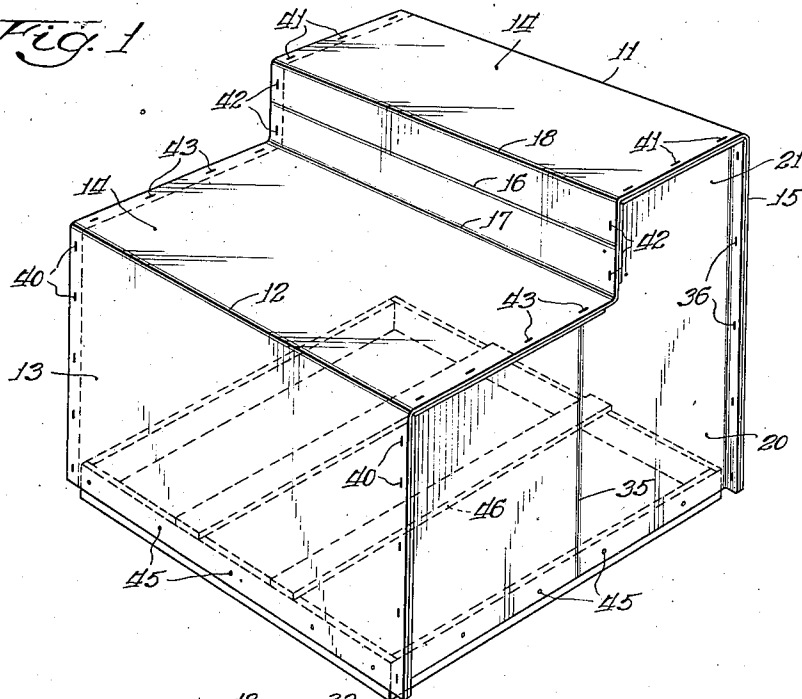
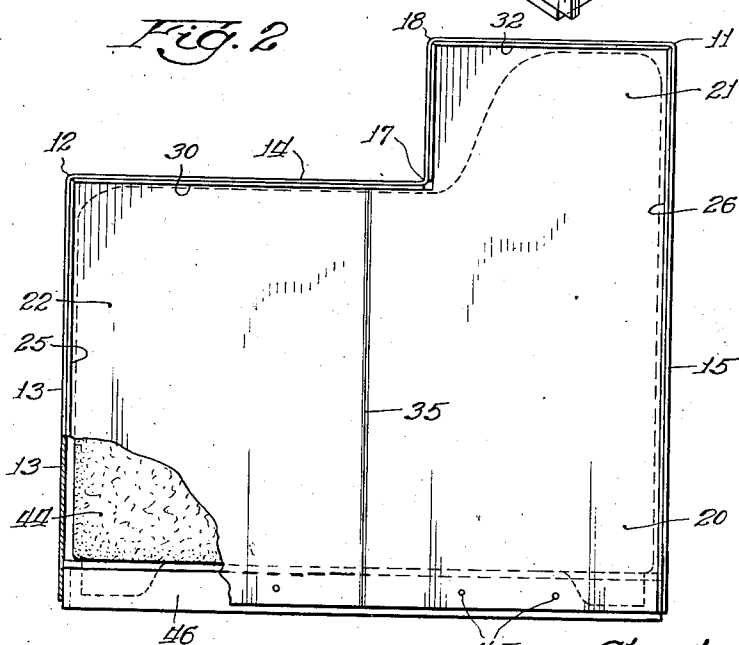


Fig. 2



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2 Sheets-Sheet 2

Fig. 3

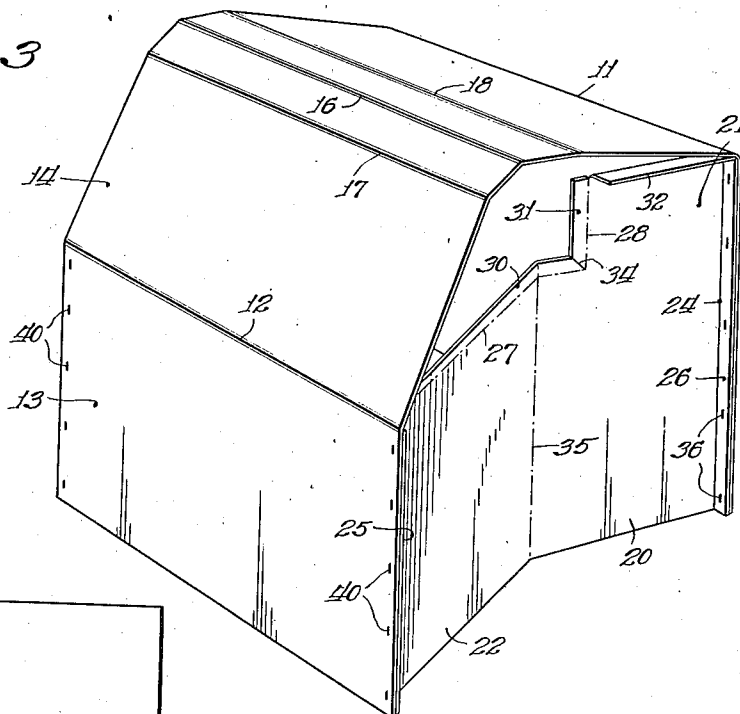


Fig. 4

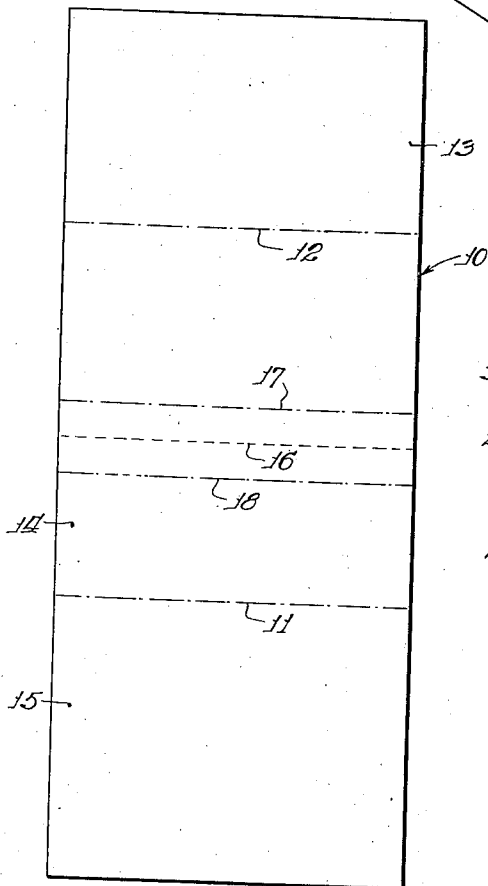
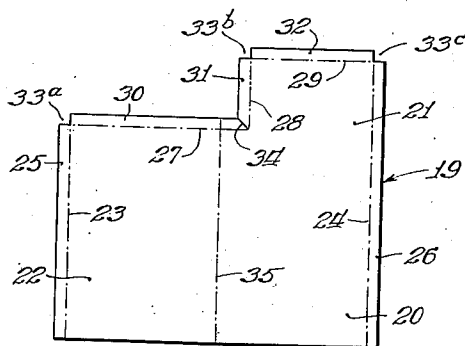


Fig. 5



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Att.

UNITED STATES PATENT OFFICE

2,346,003

COLLAPSIBLE CARTON

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Application July 2, 1942, Serial No. 449,465

3 Claims. (Cl. 229—23)

The present invention relates to a collapsible carton or container, and more particularly to such a carton adapted for packing various articles of commerce such as furniture for storage and/or shipment.

An object of the invention is to provide an improved carton or container of sufficient strength to protect the furniture or other article contained therein from being damaged during storage or shipping.

Another object of the invention is to provide a carton or container which can be folded or collapsed when not in use so that it occupies comparatively little space.

It is a further object of the invention to provide a carton or container comprising a single unit when it is in folded or collapsed condition before use as well as when it is set up ready for use.

Still another object of the invention is to provide a carton or container which is of such shape that it can be nested with other containers of similar configuration.

Yet another object of the invention is to provide a carton or container which reduces the time required in packing furniture or other articles for storage or shipment.

Other objects and advantages of the invention will be apparent from the following description when considered in conjunction with the accompanying drawings.

In the drawings;

Fig. 1 is a perspective view of a carton or container according to the present invention, showing in dotted lines a leg crate or base secured to the inside of the container at or adjacent the bottom thereof.

Fig. 2 is an elevational view of the right hand end of the carton illustrated in Fig. 1, the carton being partly broken away at one corner thereof to show a portion of an article of upholstered furniture supported therein on the base or leg crate.

Fig. 3 is a perspective view of the carton of Fig. 1 after it has been assembled for storage and shipment, and then partially set up or expanded.

Fig. 4 is a plan view of a blank suitable for forming the front, top and back walls of the carton shown in Fig. 1, and

Fig. 5 is a plan view of a blank suitable for forming an end panel of the carton shown in Fig. 1.

The novel carton or container of the present invention, a preferred embodiment of which is illustrated in Fig. 1, has its front, top and back portions formed from a blank such as that illustrated in Fig. 4 and its ends or sides formed from blanks such as that illustrated in Fig. 5, each blank being formed from relatively stiff, flexible

sheet material, such as for example, paperboard, corrugated board, box board or the like.

The blank 10 shown in Fig. 4 is provided with score or fold lines 11 and 12 to define a front wall 13, a top wall 14, and a back wall 15, whereby the top wall 14 is hingedly connected at the fold line 12 to the front wall 13 and is hingedly connected at the fold line 11 to the back or rear wall 15. The blank 10 is also provided with additional score or fold lines 16, 17 and 18 parallel to score lines 11 and 12, the fold line 16 being equidistant from the ends of the blank so that the top wall can be folded therealong to collapse the carton when it is not in use. The purpose of the score lines 17 and 18 will be described hereinafter.

A blank 19 for an end wall 20 of the carton is illustrated in Fig. 5. In order that the carton may conform generally to a piece of furniture, such as an overstuffed chair or davenport, which is to be contained therein, the back portion of the carton is formed higher than the front portion. Each end wall 20 of the carton therefore has its rear portion 21 of greater height than the front portion. As best seen in Figs. 1 and 2, the top wall 14 is folded along the score lines 17 and 18 so that it will conform to the configuration of the top edge of each end wall, the rear wall 15 being of the same height as the rear portion 21 of each end wall and the front wall 13 being of the same height as the front portion 22 of each end wall.

The blank 19 is provided with score or fold lines 23 and 24 to define flanges 25 and 26 respectively along the front and rear edges thereof, and additional score or fold lines 27, 28 and 29 are provided adjacent the top edges of the blank to define additional flanges 30, 31 and 32, respectively. To permit folding of the flanges the upper corners of the blank 19 are notched as at 33a, 33b, and 33c, and the flanges 30 and 31 are separated by a slit 34.

The blank 19 also is provided with still another score or fold line 35 equidistant from and parallel to the front and rear edges of the blank, so that when the carton is not in use, each end wall formed from a blank 19 can be folded upon itself along the score line 35.

The carton is partially assembled until ready for use, and in that condition it is adapted to be folded or collapsed so as to take up very little space, which is a very advantageous feature of the invention. The partial assembly operation is ordinarily carried out in the plant of the box or container manufacturer and may be done in the following manner:

A blank 19 is first superimposed on the back wall 15 of the blank 10 so that the free edge of flange 26 registers with a lateral edge of wall 15 and score line 29 overlies score line 11, and the two

blanks are secured together by means of a series of staples 36 (Fig. 3) or the like driven through flange 26 and back wall 15. Another blank 19 is then similarly secured along the other edge of wall 15, and each of the two blanks 19 is folded over upon itself along score lines 35 so that flanges 25 lie upon flanges 26. This stage of the assembly is completed by folding front wall 13 and that part of top wall 14 adjacent thereto over along score line 16 and securing wall 13 adjacent the edges thereof to the flanges 25, by means of staples 40 (Fig. 3). In this condition the carton occupies minimum space and so is economical to ship and to store until it is to be used.

When it is desired to make the carton ready for use, the end walls 20 are extended or unfolded to the position shown in Fig. 3 along the score line 35 and the flanges 30, 31, and 32 are folded outwardly along score lines 27, 28 and 29, respectively. The top wall 14 is then folded along score lines 17 and 18 as the carton is completely expanded so that it conforms to the upper edge of the end walls 20, and the edge portions thereof are secured to the flanges 30, 31 and 32 on the upper part of the side panels as shown in Fig. 1, by suitable means, such as staples 41, 42 and 43. The carton is then slipped over the piece of furniture 44 or other article to be covered and the bottom of the carton is secured in any suitable manner, such as for example by nails 45, to a base or leg crate 46, preferably made of wood, which has previously been secured to the bottom of the piece of furniture or the like in a known manner. Alternatively, the carton may be fully expanded, slipped over the furniture, nailed to leg crate 46, and then the top walls 14 secured to the end walls 20 by staples 41, 42, and 43. The carton containing the furniture or other article is then ready for storage or shipping.

In using the carton of the present invention, considerable time in packing is saved since the carton comprises a single integral unit which can be set up simply and quickly. Furthermore, the carton is of a size so that it stands away from the furniture adapted to be contained therein at all points, thus eliminating the need for padding.

In view of the fact that the flanges on the end walls are folded outwardly, it will be seen that the end walls are recessed and thus are not flush with the side edges of the front, top and side walls. This minimizes tearing and scratching of and other injury to the end walls. Moreover, the construction of the carton, with its strong recessed ends enables nesting of one filled carton on top of another, both in the warehouse and in shipping.

Under some conditions it may be impractical to use a single blank corresponding to that shown in Fig. 4; for instance, when a davenport is to be packed, the sheet may be too large for the box plant equipment available. In that case two or more blanks may be used which are secured together; preferably by staples, so as to function as does the blank of Fig. 4. Another feature which may be adopted is the provision of an additional flange on the flanges 30 which can be bent over in the final stitching operation to provide three thicknesses of board at this point, thereby making the package more resistant to damage in handling. Another possible modifica-

tion is the provision of a flange along the bottom edge of each of the end wall blanks 19 which can be folded under and nailed to the leg crate, so that the possibility of tearing of the board in the vicinity of the nails during handling is minimized.

Although the invention has been described and illustrated in connection with certain specific embodiments thereof, it is to be understood that various changes and modifications may be made therein without departing from the spirit and scope of the invention as set forth in the appended claims.

I claim:

1. An improved carton of corrugated or solid fiber paperboard or the like for protecting an article of upholstered furniture secured to a leg crate providing nailing strips around the outer edges thereof, said carton comprising front, back and intermediate top panels formed from a single blank and defined by a pair of parallel score lines, said front and back panels having a length substantially equal to the height of the arms and back of said furniture, respectively, and said top panel having a plurality of fold lines therein parallel to said score lines, two of said fold lines defining horizontal forward vertical riser and horizontal rear portions thereof, when the carton is set up and another of said fold lines bisecting said blank whereby said top panel may be extended upwardly to allow said front and back panels to be juxtaposed, and a pair of end wall blanks having outwardly folded flanges on their forward and rear edges secured to said front and back panels, respectively, each of said end wall blanks being provided with a fold line equidistant from said edges to enable said blank to be infolded when the carton is collapsed and having its upper edge arranged to be secured to said portions of said top panel, said carton being adapted to be secured adjacent its lower edges to said strips by nails or the like.

2. A carton according to claim 1 wherein the top edge of each of said end wall blanks conforms to and is adapted to support said top panel when said carton is set up, and is provided with flanges adapted to be outwardly folded and secured to said forward, riser, and rear portions by staples or the like.

3. In a carton for a piece of furniture or the like, said carton being formed from relatively stiff paperboard material and comprising front and back panels, a top panel and two end panels, said top and end panels being hingedly joined to said front and back panels and being provided with score lines extending thereacross substantially parallel to said front and back panels, whereby said top and end panels may be folded along said score lines to collapse said carton, the improvement wherein said end panels are higher at the back than at the front thereof and have top edges including substantially horizontal sections adjacent the back and front edges of said end panels and an intermediate riser section, and said top panel is provided with a pair of additional score lines defining a front portion, a back portion and a riser portion, said top panel portions being adapted to conform to said end panel edge sections when said carton is in expanded condition.

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