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2,779,463

SHIPPING CONTAINER AND PACKAGE

Filed Dec. 7, 1953

2 Sheets-Sheet 1

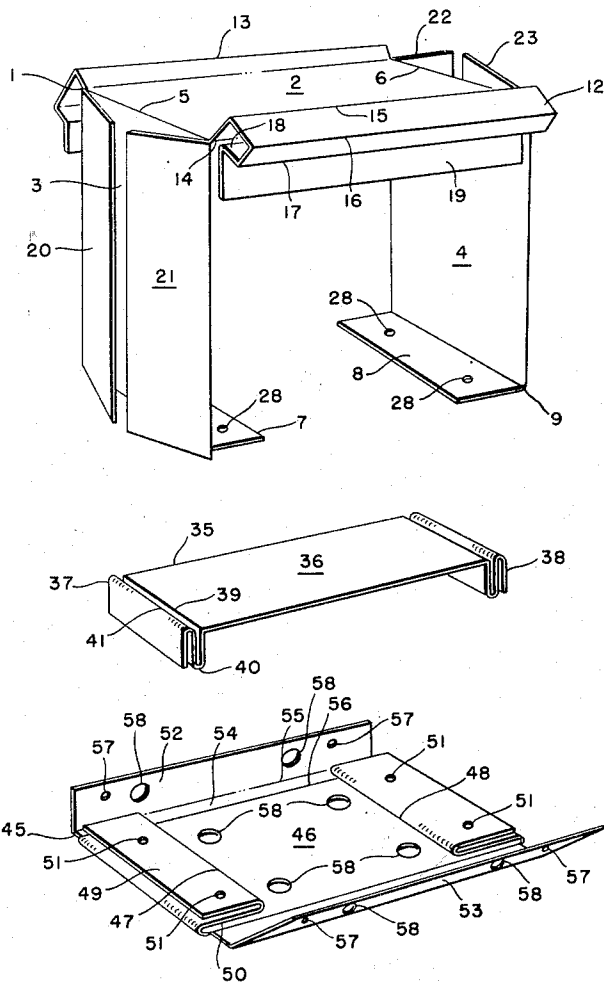


FIG. 1

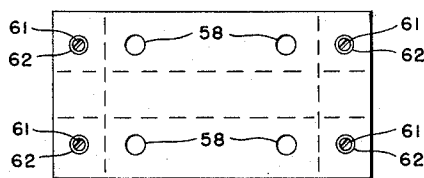


FIG. 4

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FIG. 2

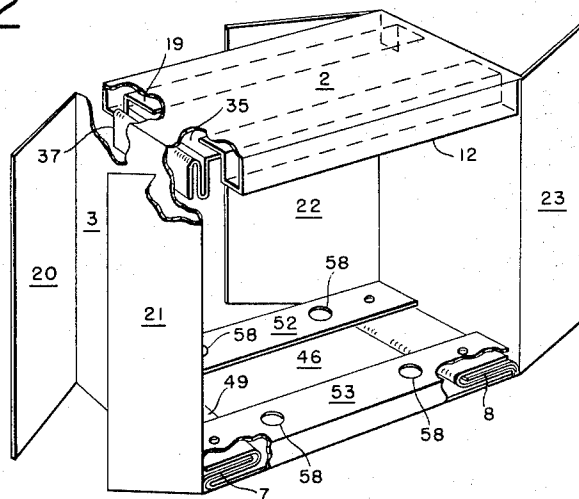
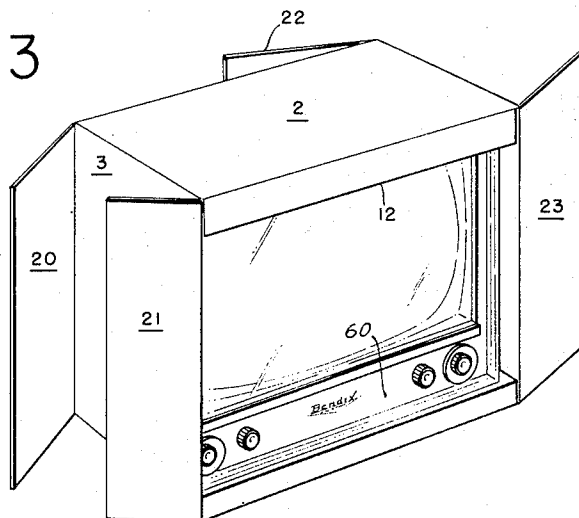


FIG. 3



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1

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SHIPPING CONTAINER AND PACKAGE

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8 Claims. (Cl. 206—46)

This invention relates to cartons or containers for the shipment of merchandise and more particularly to a container which lends itself to the housing of an article which must be accessible subsequent to its original packaging, but is intended for ultimate sale or delivery in the packaged state.

Such a container, while finding application for the packaging of a wide variety of articles in the above category, may be considered by way of example, as applied to the packaging of television receivers.

In the manufacture of such receivers it is customary to manufacture the cabinet in one plant and the electrical portions of the receiver in another. The electrical apparatus including the picture tube, is all mounted on a unitary base or chassis. The finished cabinet, having been completed at a remote plant is shipped to the point of manufacture of the electrical apparatus in the container intended to ultimately house the completed receiver. Upon arrival the cabinet is removed from the container, the container being stored temporarily, and the cabinet, after inspection for blemishes, is fed into the receiver assembly line at the point where the electrical apparatus is complete except for the control knobs.

After the electrical apparatus is installed in the cabinet, and the control knobs attached, the completed receiver is tested and inspected and then repacked in its container and shipped to a dealer.

There are several disadvantages involved in this procedure. The labor required to remove the empty cabinet from its container, store the container and insert the completed receiver into the container adds to the cost of manufacture. Furthermore, the finished cabinet is exposed to the hazards of the assembly line during insertion of the electrical portion of the receiver thereinto, the testing of the completed receiver and its packaging. Many cabinets become marred or fingerprinted and this necessitates a final inspection of the cabinet and the touching up of any blemishes before final packaging.

It is an object of the invention to provide a container for merchandise into which said merchandise may be placed in a unfinished state, which will house and protect said merchandise during completion while rendering said merchandise accessible for the operations essential to completion, and which may, upon completion of the merchandise, be arranged to completely house and protect said merchandise during shipment.

It is a further object of the invention to provide such a container to which said merchandise may be secured and released from outside the container.

It is another object to provide such a container, the bottom of which may be secured to the contained merchandise, the bottom being reenforced to constitute a skid for said merchandise.

These and other objects and advantages of the invention are realized by a rectangular carton having the top and two opposite sides formed of an integral sheet of material such as corrugated paper board with the side pieces provided along their lateral edges with flaps which close

2

to form the remaining sides of the container. The edges of the portion of the sheet forming the top are folded back under the top to form abutments to retain the merchandise when the flap-formed sides are open for access thereto.

A bottom skid member is formed of a separate sheet of corrugated board having its ends folded to provide protective padding and support to the merchandise during assembly operations. These folded portions have interleaved with them the end flaps of the above described side portions. The skid member also has side flaps which fold over the interleaved bottom assembly and the whole bottom assembly is bolted or screwed to the bottom of the merchandise.

A separate top insert of corrugated board with its end portions folded into abutments, is also provided.

Referring now to the drawings:

Fig. 1 is an exploded view in perspective showing the various portions of a carton embodying the invention, the portions being shown in the proper relative locations for assembly;

Fig. 2 is a perspective view, with portions cut away, of the carton of Fig. 1 after assembly;

Fig. 3 is a perspective view of the carton of Fig. 1 with a television receiver housed within it; and

Fig. 4 is a plan view of the bottom of the carton of Fig. 1, showing the securing means for joining the carton to the contained merchandise in place.

Referring more particularly to the figures of the drawing, there is shown in Fig. 1 a sheet 1 of cardboard or corrugated paper board of which the top and sides of the carton are formed. The rectangular top panel 2 occupies the central portion of the sheet, being separated from the rectangular side panels 3 and 4 by fold lines 5 and 6. The side panels 3 and 4 terminate in flaps 7 and 8, respectively. These flaps are joined to their respective side panels by way of crease or hinge lines as indicated at 9, between panel 4 and flap 8. These crease lines allow the flap 8 to be bent to a position as shown, in which it extends at right angles to the panel 4. The construction of flap 7 is identical with 8.

The remaining sides of the top panel 2 terminate in multiple foldable flap portions 12 and 13. Each of these portions is formed with five parallel crease lines, such as 14, 15, 16, 17 and 18 which allow it to be folded into the shape of an elongated box with the end flap 19 resting against the top panel 2 as clearly shown in the cutaway portion of Fig. 2. The flap portion 13 is constructed and folded in an identical manner.

The side panels 3 and 4 are formed along their lateral edges with door flaps 20 and 21, and 22 and 23 respectively, the door flaps being joined to their panels by crease or hinge lines.

Formed in the flaps 7 and 8 are holes 28 for a purpose to be described later.

A second sheet 35 forming a portion of the carton of Fig. 1 is shown just below the sheet 1. This sheet is made up of a central panel 36 slightly smaller in dimensions than the top panel 2 of sheet 1. Two opposing sides of the panel 36 terminate in foldable flap portions 37 and 38. These flap portions are each divided into three panels by three parallel fold lines, those of portion 37 being indicated by the numerals 39, 40 and 41 and those of portion 38 being identical and resulting in an identical folded construction. The three panels of each portion are folded to lie against each other as shown.

The third sheet making up the carton of Fig. 1 is the sheet 45, which forms the bottom of the carton. The sheet is formed with a central rectangular panel 46 which is of the same size as the panel 2. Two opposing sides of the panel 46 terminate in foldable flap portions 47 and 48, each composed of two rectangular flaps of

3

equal area, those of portion 47 being indicated by numerals 49 and 50 and those of portion 48 being identical thereto. These portions are folded over to lie on top of panel 46 as shown. Holes 51 are formed in each fold of the portions 47 and 48 and the underlying parts of panel 46.

The remaining sides of the panel 46 have extending from them flaps 52 and 53. Each flap is separated from the panel by a joining strip such as the strip 54 shown between flap 52 and the panel. This strip is formed by two parallel crease or fold lines 55 and 56 spaced apart by the thickness of three layers of the board of which the carton is formed. The flaps 52 and 53 are each formed with two holes 57, which, when the flaps are folded over on top of the folded portions 47 and 48 are in direct superimposition with the holes 51. Access holes 58 are formed in the panel 46 and in the flaps 52 and 53 as shown.

Fig. 2 shows the carton assembled. It will be noted that sheet 35 is in place with the panel 36 pressing the terminal flaps 19 of the portions 12 and 13 against the top panel 2. The remaining panels of the flap portions 12 and 13 are folded into rectangular box shapes, the sheet 35 being properly dimensioned to fit snugly between these box shapes and the sides 3 and 4 of the carton, with the flap portions 37 and 38 folded.

The bottom sheet 45 is in place between the lower ends of the sides 3 and 4 with the flaps 7 and 8 interleaved between the upper and lower folds of the flap portions 47 and 48. In this condition the respective holes 28, 51 and 57 are all in superposed matching relationship.

The carton of this invention is intended for use as a housing for items of furniture or other merchandise having external surfaces subject to injury and requiring handling involving access to the interior. Its application to television receivers during manufacture has been referred to above, by way of example, and its use with respect to such merchandise will now be further explained, without the intention of restricting the application of the invention to this particular item.

When used as a housing for television receivers, the cartons would normally be shipped to the cabinet factory. There a cabinet is slid into the container assembled as shown in Fig. 2, through one of the open sides. One of the flap members 12 or 13 may be left loose as in Fig. 1 until the cabinet is in place. The bottom member 45 may be secured to the sheet 1 before insertion of the cabinet by stapling through the interleaved flaps 7 and 8 of the sheet 1 and the folds of the flap portions 47 and 48 of the bottom member.

If it is desired to use the container without the stapling of the bottom member to the flaps 7 and 8 the following method of cabinet assembly may be followed. The cabinet is first placed upon the bottom member 45. Then the member 1 with the member 35 in place against the panel 2 is placed over the cabinet with the sides 3 and 4 spread apart at the bottom to clear the cabinet. The folded flap portions 37 and 38 and the box-shaped portions 12 and 13 are fitted down around the top of the cabinet. Then the lower portions of sides 3 and 4 are brought in towards the sides of the cabinet and the flaps 7 and 8 are inserted into the folds of portions 47 and 48 as indicated in Fig. 2.

The assembled cabinet and receiver will, after assembly by either method, appear as in Fig. 3, which shows the receiver 60 within the carton. Screws or bolts 61 backed by washers 62 are now inserted through the superimposed holes 28, 51, 57 and screwed into the base of the cabinet to hold the cabinet firmly in place on the base member and to hold the various parts of the carton firmly in their respective assembled places.

The door flaps 20, 21, 22 and 23 are now folded against the front and back of the cabinet and taped into place.

The carton and contents are now shipped to the re-

4

ceiver plant. At this point the door flaps are opened and may be clipped back into place against the side walls 3 and 4 in the position shown in Fig. 1. The packaged cabinet with the carton open in this manner is fed into the receiver assembly line and the receiver is inserted and screwed or bolted into its proper position in the cabinet through the access holes 58. Now the receiver is moved along the assembly line for the final assembly of knobs and is tested in its assembled state. During this procedure it is moved along the assembly line to various stations, with the member 45 acting as a skid for the assembly during these operations.

When testing is complete the door flaps 20, 21, 22 and 23 are retaped and the assembly shipped to the distributor. The flaps may be additionally stapled, if desired. The receiver remains readily accessible for any testing or inspection which may be necessary between shipment and ultimate delivery to the consumer, without the necessity of its removal from the carton.

The carton of this invention has many advantages for use with many types of merchandise. It affords ready access, without loss of protection, to merchandise sold with optional accessories, which may be installed as selected in the merchant's place of business, without removal of the carton. Many other uses will suggest themselves.

While the top and sides of the container have been shown as formed from a single sheet of material, it will be obvious that when forming a container for a large object it may not be convenient to utilize a single sheet. In such cases the blank may consist of two or more sheets stapled or otherwise secured together to form an integral unit.

What is claimed is:

1. A rectangular shipping container comprising a first member constituting the top and sides of said container, said member comprising a central rectangular panel forming said top, a pair of rectangular panels hinged to opposite sides of said central panel and forming opposite sides of said container, a pair of tab portions each hinged to a respective one of the remaining sides of said central panel, said tab portions being folded into abutments depending from said central panel between said opposite sides, and a pair of rectangular flaps each integrally hinged to a respective one of said rectangular panels along its bottom end and being folded to a position parallel with said central panel, each of said pair of rectangular panels having a rectangular flap integrally joined to it along each of its lateral edges and folded with the corresponding flap of the other of said pair of rectangular panels to form one of the remaining sides of said container; and a second member forming the bottom of said container, said second member comprising a rectangular central panel of substantially the same size as the central panel of said first member, flap portions integrally joined to each of the sides of said central panel and folded to lie thereover, each of the said rectangular flaps joined to the bottoms of the sides of said container lying in facing contact with a corresponding one of said flap portions, said flap portions, said rectangular flaps joined to the bottoms of said sides and said central panel of said second member having holes formed therein and so located that said holes form continuous passages, merchandise inside said container and means extending through said holes and securing said sides and bottom of said container together and to said merchandise.

2. A rectangular shipping container comprising a first member constituting the top and sides of said container, said member comprising a central rectangular panel forming said top, a pair of rectangular panels hinged to opposite sides of said central panel and forming opposite sides of said container, and a pair of rectangular flaps each integrally hinged to a respective one of said rectangular panels along its bottom end and being folded to a position parallel with said central panel, each of

5

said pair of rectangular panels having a rectangular flap integrally joined to it along each of its lateral edges and folded with the corresponding flap of the other of said pair of rectangular panels to form one of the remaining sides of said container; and a second member forming the bottom of said container, said second member comprising a rectangular central panel of substantially the same size as the central panel of said first member, flap portions integrally joined to each of the sides of said central panel and folded with at least two folds to lie thereover, each of the said rectangular flaps joined to the bottoms of the sides of said container being interleaved between said folds of said flap portions, said flap portions, said rectangular flaps joined to the bottoms of said sides, and said central panel of said secured member having holes formed therein and so located that said holes form continuous passages, merchandise inside said container and means extending through said holes and securing said sides and bottom of said container together and to said merchandise.

3. A rectangular shipping container comprising a unitary blank folded to form the top and sides of said container, a rectangular flap hinged to the bottom edge of each of a pair of opposite sides of said container, means forming the bottom of said container and comprising a blank having a central rectangular panel and having flaps hinged to the edges thereof and folded to overlie said central panel, each of said rectangular flaps of the first named blank lying in facing contact with a corresponding one of said flaps of the last named blank, all of said flaps and said central panel of said bottom having holes formed therein, said holes being so located that they form continuous passages, merchandise inside said container and means extending through said holes and securing said sides and bottom together and to said merchandise.

4. The combination with an article of merchandise having a generally rectangular shape: of a shipping container enclosing said article and having a top and side walls formed of an integral blank and conforming closely to the shape and dimensions of said article, two opposite side walls of said container each being composed of a single unitary panel and having hinged to each of its lateral edges a rectangular panel, each of which is folded at right angles to said unitary panels to lie against said article and constitutes a half of one of the remaining sides of said container, each of said unitary panels having hinged to its bottom edge a rectangular flap, means forming the bottom of said container and comprising a unitary rectangular blank of substantially the same size as said top and having flap portions hinged to each of its sides and folded to overlie said central panel, said rectangular flaps lying in facing contact with corresponding flaps of the last named blank, each of said flaps of both of said blanks and said central panel having holes formed therein, said holes being so located, when said flaps are folded to overlie said bottom and lie in facing contact, as to form passages, and securing means extending through said passages and into said article of merchandise and binding said sides and bottom of said container together and to said article of merchandise.

5. The combination with an article of merchandise having a generally rectangular shape: of a shipping container enclosing said article and having a top and side walls formed of an integral blank and conforming closely to the shape and dimensions of said article, two opposite side walls of said container each being composed of a single unitary panel and having hinged to each of its lateral edges a rectangular panel, each of which is folded at right angles to said unitary panels to lie against said article and constitutes a half of one of the remaining sides of said container, each of said unitary panels having hinged to its bottom edge a rectangular flap, means forming the bottom of

6

said container and comprising a unitary rectangular blank of substantially the same size as said top and having flap portions hinged to two of its opposite sides and folded to overlie said central panel, said rectangular flaps lying in facing contact with a respective one of said flaps of the last named blank, one of the flaps in each pair of said flaps lying in facing contact being longer than the other and being folded back to enclose and be interleaved by the other each of said flaps of both of said blanks and said central panel having holes formed therein, said holes being so located, when said flaps are folded to overlie said bottom and interleaved, as to form passages, and securing means extending through said passages and into said article of merchandise and binding said sides and bottom of said container together and to said article of merchandise.

6. A rectangular shipping container comprising a first member constituting the top and sides of said container, said member comprising a central rectangular panel forming said top, a pair of rectangular panels hinged to opposite sides of said central panel and forming opposite sides of said container, a pair of tab portions each hinged to a respective one of the remaining sides of said central panel, said tab portions each being folded about parallel fold lines into abutments of substantially rectangular cross-sectional shape depending from said central panel between said opposite sides, and a pair of rectangular flaps each integrally hinged to a respective one of said rectangular panels along its bottom end and folded to a position parallel with said central panel, each of said pair of rectangular panels having a rectangular flap hinged to it along each of its lateral edges and folded with the corresponding flap of the other of said pair of rectangular panels to form one of the remaining sides of said container; a second member comprising a rectangular blank terminating on two opposing sides in multiply folded portions depending from said blank, said blank being located inside said container and closely beneath and parallel to said central panel and being so dimensioned as to form said multiply folded tab portions into abutments engaging said opposite sides, said second member being held in place by the friction between said multiply folded portions in which it terminates and said opposite sides; and a third member forming the bottom of said container, said third member comprising a central rectangular panel the same size as said central panel of said first member, the last named central panel terminating at each of two opposite sides in a first rectangular panel of substantially the same size as one of said rectangular flaps hinged to the bottom ends of the sides of said container, and being folded to overlie the last named central panel, said first rectangular panel terminating in a second rectangular panel of a size substantially identical with the first and folded outwardly to overlie said first panel, a pair of rectangular flaps each hinged to the last named central panel along one of the remaining sides thereof and folded to overlie said first and second rectangular panels, each of the said rectangular flaps hinged to the bottoms of the sides of said container being interleaved between a respective pair of said first and second panels, and means securing said interleaved panels and flaps together.

7. A rectangular shipping container comprising a first member constituting the top and sides of said container, said member comprising a central rectangular panel forming said top, a pair of rectangular panels hinged to opposite sides of said central panel and forming opposite sides of said container, a pair of tab portions each hinged to a respective one of the remaining sides of said central panel, said tab portions each being folded into abutments of substantially rectangular cross-section shape depending from said central panel between said opposite sides, and a pair of rectangular flaps each integrally hinged to a respective one of said rectangular panels along its bottom end and folded to a position parallel with said central

panel, each of said pair of rectangular panels having a rectangular flap hinged to it along each of its lateral edges and folded with the corresponding flap of the other of said pair of rectangular panels to form one of the remaining sides of said container; and a second member forming the bottom of said container, said second member comprising a central rectangular panel the same size as said central panel of said first member, the last named central panel terminating at each of two opposite sides in a first rectangular panel of substantially the same size as one of said rectangular flaps hinged to the bottom ends of the sides of said container, said panel being folded to overlie the last named central panel, said first panel terminating in a second rectangular panel of a size substantially identical with the first and folded outwardly to overlie said first panel, a pair of rectangular flaps each hinged integral with the last named central panel along one of the remaining sides thereof and folded to overlie said first and second rectangular panels, each of the said rectangular flaps hinged to the bottoms of the sides of said container being interleaved between a respective pair of said first and second panels, and means securing said interleaved panels and flaps together.

8. A rectangular shipping container comprising a first member constituting the top and sides of said container, said member comprising a central rectangular panel forming said top, a pair of rectangular panels hinged to opposite sides of said central panel and forming opposite sides of said container, a pair of tab portions each hinged to a respective one of the remaining sides of said central panel, said tab portions each being folded into abutments of substantially rectangular cross-sectional shape depending from said central panel between said opposite sides, and a pair of rectangular flaps each integrally hinged to a respective one of said rectangular panels along its bottom end and being folded to a position parallel with said central panel, each of said pair of rectangular panels having a rectangular flap hinged to it along each of its lateral

edges and folded with the corresponding flap of the other of said pair of rectangular panels to form one of the remaining sides of said container; and a second member forming the bottom of said container, said second member comprising a central rectangular panel the same size as said central panel of said first member, the last named central panel terminating at each of two opposite sides in a first rectangular panel of substantially the same size as one of said rectangular flaps hinged to the bottom ends of the sides of said container, said panel being folded to overlie the last named central panel, said first panel terminating in a second rectangular panel of a size substantially identical with the first and folded outwardly to overlie said first panel, each of the said rectangular flaps hinged to the bottoms of the sides of said container being interleaved between a respective pair of said first and second panels, all of the panels of said second member and said rectangular flaps hinged to the bottoms of said sides of said container having holes formed therein in vertically matching relationship, merchandise in said container, and means extending through said holes and securing said interleaved flaps and panels to said merchandise.

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