

1

3,136,414

SHIPPING CONTAINER

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Filed Jan. 3, 1962, Ser. No. 164,040

1 Claim. (Cl. 206—46)

This invention relates to a container, and more particularly to the construction of, and method of making, a container used as a shipping carton for a telephone switch shelf.

Heretofore, telephone equipment has usually been shipped in wooden cartons. These wooden cartons are relatively heavy and thus add significantly to the shipping weight; they are also rather expensive to construct. Furthermore, tests have shown these cartons to be somewhat brittle under the severe shock and vibration encountered during conventional modes of transportation.

Another type of carton presently used to ship telephone equipment employs wooden reinforcement strips sandwiched between two separate sheets of fiber—the sheets being nailed to the wooden strips to form a panel. In that technique, each surface of the carton is comprised of a separate panel and the edges of the panel are secured together to form the completed carton. That type of construction is objectionable because it requires considerable assembly time, and the individual panels of the carton have a tendency to become separated.

An object of the present invention is to provide an inexpensive, yet sturdy, carton for the shipment of products such as telephone apparatus.

A further object is to provide a simple and economical method of making a shipping carton.

A feature of this invention is the provision of a shipping carton, three sides of which are formed from a single sheet of material.

In the embodiment disclosed herein, a shipping carton for a telephone switch shelf is made from a single sheet of multiple wall corrugated sheet material. The sheet is bent along prescored lines into a U-shaped channel, whereupon wooden end pieces and a U-shaped wooden center piece are placed in the channel. The sides and bottom of the channel are then stapled to these wooden pieces. Each switch shelf is placed in a shipping carton with the ends of the metal bars which support the shelf fitting into slots in the inside face of the wooden end pieces. After the switch shelf is in position in the carton, a cover of corrugated material is placed over the top of the carton and nailed into position.

The present invention has been illustrated in the accompanying drawings in which:

FIG. 1 shows a flat sheet of corrugated material which has been prescored along predetermined lines.

FIG. 2 shows an edge view of the sheet of corrugated material with an end piece in phantom and with the sides of the sheet shown as they would appear when bent into a U-shape.

FIG. 3 shows an exploded view of the carton and contents.

FIG. 4 shows a completed carton with the cover secured into position.

Referring now to the drawings, a single flat sheet 17 of corrugated material, is bent along prescored lines 11 and 12 to form a U-shaped channel as indicated in FIG. 2.

2

The corrugated sheet material may be of the type disclosed in U.S. Patent 2,759,523. Two end pieces 13 and 13A and flat center piece 15 are placed in position in the channel, and staples 25 are used to secure the channel to these wooden pieces to form the open carton 30 as shown in FIG. 3. It is noted that end pieces 13 and 13A are mirror images of one another and contain slots 20 and 20A open at the top and ending a few inches above the bottom of the carton.

A typical switch shelf 29 as shown in FIG. 3 as it enters the shipping room, having several wooden pieces 14 bolted crosswise of the shelf. Flat wooden pieces 32 under crosspieces 14 extend slightly over the top of each switch 23 so as to secure each switch in place. Switch shelves of this general type are shown, for example, in the Automatic Electric Technical Journal, April 1948, page 31, as they appear when installed in an exchange. Shelf 29 is placed in carton 30 with the ends of bars 21 and 28 inserted in slots 20 and 20A. These slots 20 and 20A serve as a support and mounting for the ends of bars 21 and 28. Wooden pieces 31 are nailed onto end pieces 13 and 13A after the shelf is lowered into position to hold the ends of bar 28 into slots 20 and 20A. Switches 23 have been positioned along bar 21 and 28 with a slight gap about mid span. A wooden cross piece 22 having a cut out 27 may be placed under bar 21 in this gap between switches 23 so as to rest across the top portions of center piece 15. An identical cross piece 24 is placed above bar 28 with the cutout 26 in a downward position.

Nails are driven through nailing clips 19 from the outside of carton 30 into the ends of cross pieces 22 and 24, and also into the ends of wooden pieces 14. In this manner the mid portion of the shelf is amply supported. A cover 16 of corrugated material fits over the top of carton 30, overlapping the sides of carton 30 and the wooden end pieces 13 and 13A. The cover 16 is nailed to the wooden end pieces. A thin strip of tape may be placed along each edge of cover 18 so as to slightly overlap the sides of the carton. Steel straps (not shown) may be tightened around completed carton 26 for added strength. L-shaped metal runners (not shown) may be nailed to each end of carton 26 along the bottom edge so that the carton may be easily slid over a rough floor.

It should be noted that end pieces 13 and 13A serve a triple function: as a mounting and support for the ends of the longitudinal bars of the switch shelf, as a mounting for the corrugated sheet material, and as an end piece for the carton. In addition, center piece 15 serves a triple function: as a support for the mid span of the shelf (by supporting cross piece 22), as a reinforcement for the mid portion of the carton, and as a mounting for the corrugated sheet material.

While a particular form of the carton has been shown for use in shipment of telephone products, it is to be understood that the invention is not restricted in scope to the embodiment disclosed herein, and that modifications may be made within the scope indicated by the appended claim without departing from the spirit or sacrificing any of the advantages of this invention.

What is claimed is:

A shipping carton for a piece of equipment mounted on a longitudinally extending structural support comprising, a U-shaped channel member of corrugated sheet mate-

rial folded from a single sheet of the material to form the sides and bottom of the carton, a pair of end pieces each having a vertical slot on the inner side thereof receiving the ends of said support and placed at each end of the carton and nailed thereto to form end closures for the end of the carton and supports for the equipment, a rigid U-shaped center reinforcement nailed to the sides of said carton to support the center sides thereof, a rigid cross piece in bridge of said center reinforcement having a slot in its upper surface supporting the center of said support of the equipment and also nailed to the sides of the channel member of the carton, and a series of top locking members each resting across the top of said equipment and also nailed to the sides of said channel member to reinforce the same and hold the

5

10

15

equipment in place, and a cover of corrugated sheet material covering the top of said carton and nailed to said end supports.

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