Mar. 27, 1923. 1,449,374.

E. W. BONFIELD.

SHIPPING CRATE.

FILED DEC. 31, 1921. 2 SHEETS—SHEET 1.

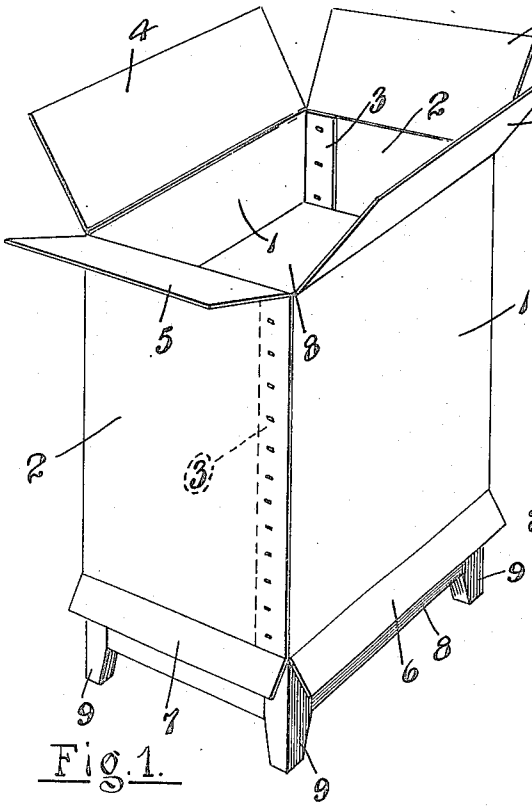


Fig. 1.

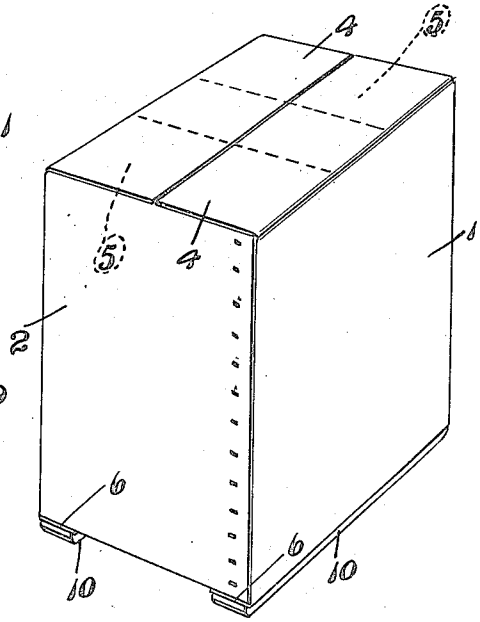


Fig. 2.

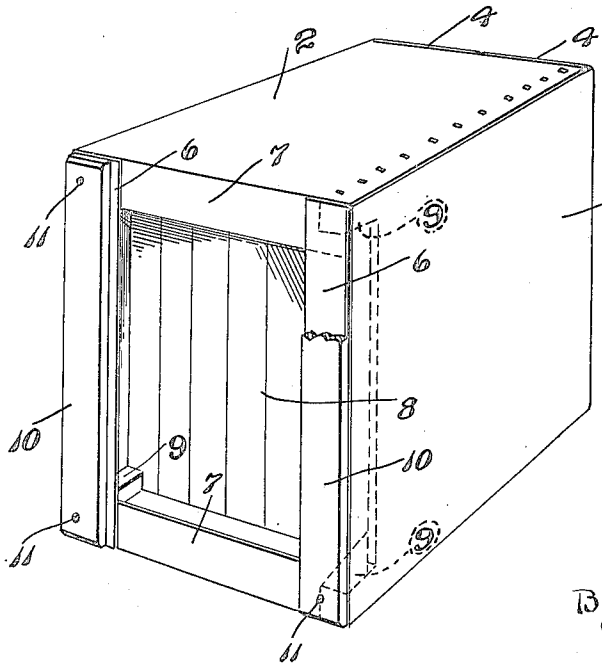


Fig. 3.

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E. W. BONFIELD.

SHIPPING CRATE.

FILED DEC. 31, 1921. 2 SHEETS—SHEET 2.

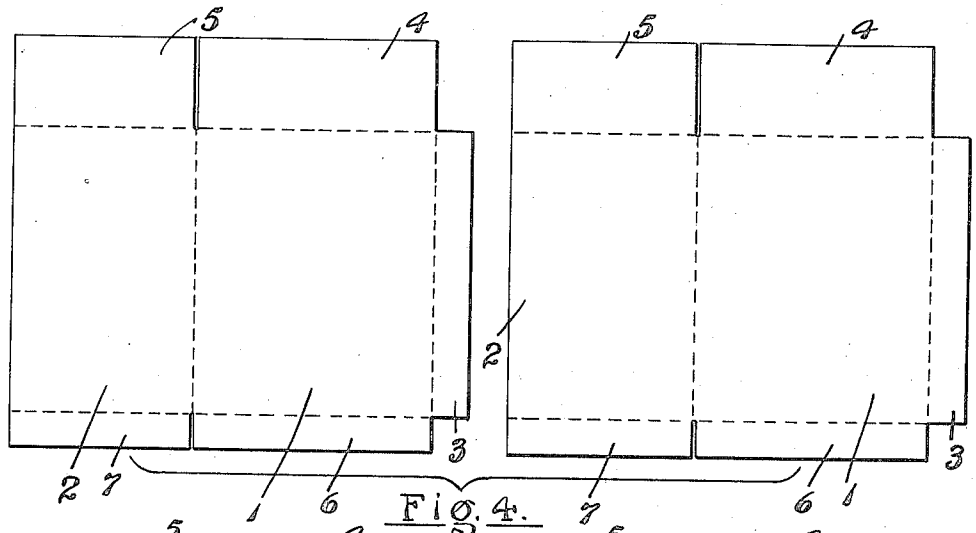


Fig. 4.

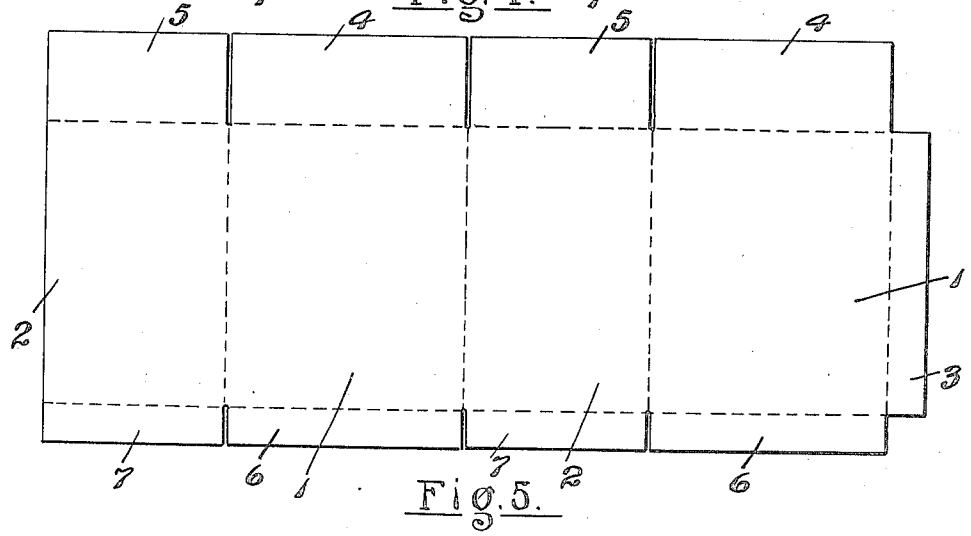


Fig. 5.

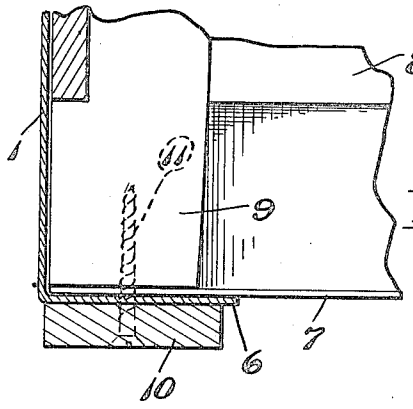


Fig. 6.

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Patented Mar. 27, 1923. 1,449,374

UNITED STATES PATENT OFFICE.

EMMONS W. BONFIELD, OF GRAND RAPIDS, MICHIGAN, ASSIGNOR TO AMERICAN BOX BOARD COMPANY, OF GRAND RAPIDS, MICHIGAN, A CORPORATION OF MICHIGAN.

SHIPPING CRATE.

Application filed December 31, 1921. Serial No. 526,302.

To all whom it may concern:

Be it known that I, EMMONS W. BONFIELD, a citizen of the United States of America, residing at Grand Rapids, in the county of Kent and State of Michigan, have invented certain new and useful Improvements in Shipping Crates; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to a crating or shipping carton for articles of furniture, particularly refrigerators, ice cream cabinets and the like, though it is readily adaptable for the crating for shipment of a great many other articles, such as desks, bureaus, dressers, chiffonniers and the like and is not to be considered as restricted in use to any particular articles of furniture. It is a primary object and purpose of the invention to provide a cover, in effect a covering crate for such articles, made almost entirely from strong paper board, and applied in a novel manner so that it may be very securely held in place on such article, the holding means used comprising skids for the ready slidable handling of the crated article, all being effected in a very simple yet effective manner and with a minimum cost. Furthermore, the article to be shipped is completely covered, no parts being exposed with consequent liability to scratching or other injury, and the paper board covering in contact with the article protecting the finish thereof as distinguished from the very frequent crushing and scratching of the varnish or other finish on the article when crating lumber is used. The invention consists in various novel constructions and arrangements of parts for effecting the ends stated as well as many others not specifically enumerated at this time but which will appear as the description of the invention, shown in the accompanying drawings progresses, in which drawings,

Fig. 1 is a perspective view illustrating the operation of applying the crating cover to an article of furniture, such as a cabinet or small refrigerator.

Fig. 2 is a perspective view showing the article completely crated.

Fig. 3 is a perspective view of the construction shown in Fig. 2, the same being turned on one side to disclose the lower end and the skids used, one of the same being partly broken away.

Fig. 4 is a plan of the two blanks of paper board used in the construction of the cover.

Fig. 5 is a like view of a blank of a single piece of material which may be used for the cover, and

Fig. 6 is a fragmentary enlarged transverse vertical section through one side and at the lower portion thereof of a crated article of furniture.

Like reference characters refer to like parts in the different figures of the drawings.

The covering for the article to be crated for shipment is, preferably made from two identical flat blanks of paper board, including a rectangular section 1 integral with which is a second rectangular section 2 located at one side of the section 1, while at the opposite side is a relatively narrow section 3 of a length equal to the length of sections 1 and 2. At each end of the section 1 flaps are provided having a length equal to the width of said section 1, the upper end flap 4 being wider than the lower end flap 6. Similarly, like flaps 5 and 7 extend from the upper and lower ends of section 2, having a length equal to the width of said section and being of the same width as flaps 4 and 6, respectively, from which they are separated in the blanks by cuts or slots as shown in Fig. 4.

In practice the two blanks are connected together and folded into rectangular form, the sections 1 and 2 lying in planes at right angles to each other, the narrow sections 3 being turned to lie inside of and against the sections 2, as shown in Fig. 1, a permanent connection being made by stapling the same together. This cover thus made may be slipped over the refrigerator or other article 8, being drawn downwardly thereover. When it reaches the proper position, flaps 5 are turned inwardly over the upper end of the refrigerator 8, and then the flaps 4 folded inwardly over flaps 5 and sealed together in any desired manner to make a permanent connection. The lower flaps 7 are likewise turned inwardly so as to pass under the lower ends of the legs 9 of the refrigerator, and flaps 6 turned inwardly to lie at their ends against the ends of flaps 7. Two skids 10, one at each side of the refrigerator are

placed over and lengthwise of the flaps 6 and secured in place by screws 11 which are passed through the skids at the ends thereof, through the ends of flaps 6 and 7 where they overlap and into the legs 9, thereby securely connecting the skids and at the same time securing the covering against removal. The skids are of wood, preferably, being relatively thin and chamfered at their ends and on their under sides as shown.

A refrigerator or other article of similar outer form crated and covered as described is completely protected. No part is exposed for injury to the finish. The crated article is readily moved over a flat surface on the skids. When the destination is reached, removal of the screws 11 detaches the skids and frees the crating cover for easy removal. The paper board is strong and tough and resists puncture to a very high degree. It makes a practically perfect covering for such articles of furniture as refrigerators, desks, chiffonniers, or the like, cabinets of various kinds or any other article having a more or less flat upper side and a rectangular cross section. The cost is low, crating lumber, a considerable item of expense, is eliminated, the cover may be kept for protecting the article when not in use, and the blanks from which the covering is made may be shipped to the place of use in flat form, taking little space.

It is obvious that the two blanks of paper board may be replaced by a single blank, as shown in Fig. 5, thereby eliminating one of the sections 3. For instance the blank shown in Fig. 5 is the same as though the section 3 of the blank at the left in Fig. 4 was left out and the blank at the right integrally joined therewith. In such case, the blank is larger and in connecting it for a rectangular cover, only one row of staples are required. The placing over the article to be covered, and the closing of the upper end and attachment of the skids is the same as previously described.

The crating cover disclosed has been used practically and with especially satisfactory results. The invention is defined in the appended claims and I consider myself entitled to all forms of structure coming within their scope.

I claim:

1. A shipping crate or carton for enclosing and covering refrigerators or similarly shaped articles, comprising a cover adapted to be placed over the sides, front and back and top of the article and having flaps adapted to be turned in under the legs of said article, and skids detachably secured to the legs of said article under and at the lower ends thereof, said skids covering said inturned flaps, substantially as described.

2. A shipping crate or carton for enclosing and covering refrigerators or similarly shaped articles, comprising a cover of paper board having vertical sides and front and back connected together, flaps at the upper ends of said sides, front and back adapted to be folded over toward each other to complete the closure for the upper end of the cover, relatively narrow flaps at the lower ends of the sides, front and back adapted to be folded inwardly under the lower ends of the legs of said article to be covered, and two skids located one at each side of and under the lower side flaps and adapted to be connected to the lower ends of the legs of said article, substantially as described.

3. In combination with an article to be crated for shipment, a cover of paper board covering the sides, back, front and top of the article, and means connected with said cover passing under the lower end of the article and secured thereto to hold the cover against removal, substantially as described.

4. In combination with a refrigerator or like shaped article to be crated for shipment, a cover of paper board covering the sides, back, front and top of the article, said cover at its sides at the lower edges thereof having integral relatively narrow flaps turned under the lower ends of the legs of the refrigerator, boards located under the flaps lengthwise thereof, and fastening devices passing through the boards and said flaps into the lower ends of the legs of the refrigerator.

5. In combination with a refrigerator or like shaped article to be crated for shipment, a cover of paper board completely covering the sides, back, front and top of the article, a relatively narrow integral flap connected to each side of the cover at the lower edge thereof and turned under the legs of the article, and fastening means passing through said flaps into the lower ends of the legs of said article thereby securing the cover against removal, substantially as described.

6. A shipping crate or carton for enclosing and covering refrigerators or similarly shaped articles, comprising a blank of paper board adapted to be folded into rectangular shape and positioned vertically with open ends whereby it may be moved downwardly over the article to be crated, said blank in such position including flaps at its upper and lower ends adapted to be folded inwardly over the top of the article and under the lower ends of the legs thereof, and two skids adapted for attachment to the legs of the article after the cover has been placed thereon, said skids lying against flaps at opposite sides of the carton and securing the same with the attachment of the skids in place, substantially as described.

In testimony whereof I affix my signature.

EMMONS W. BONFIELD.