

Jan. 8 , 1924.

J. J. DALY

1,480,377

FIBER SHIPPING CASE

Filed Feb. 7, 1922

4 Sheets-Sheet 1

Fig. 1.

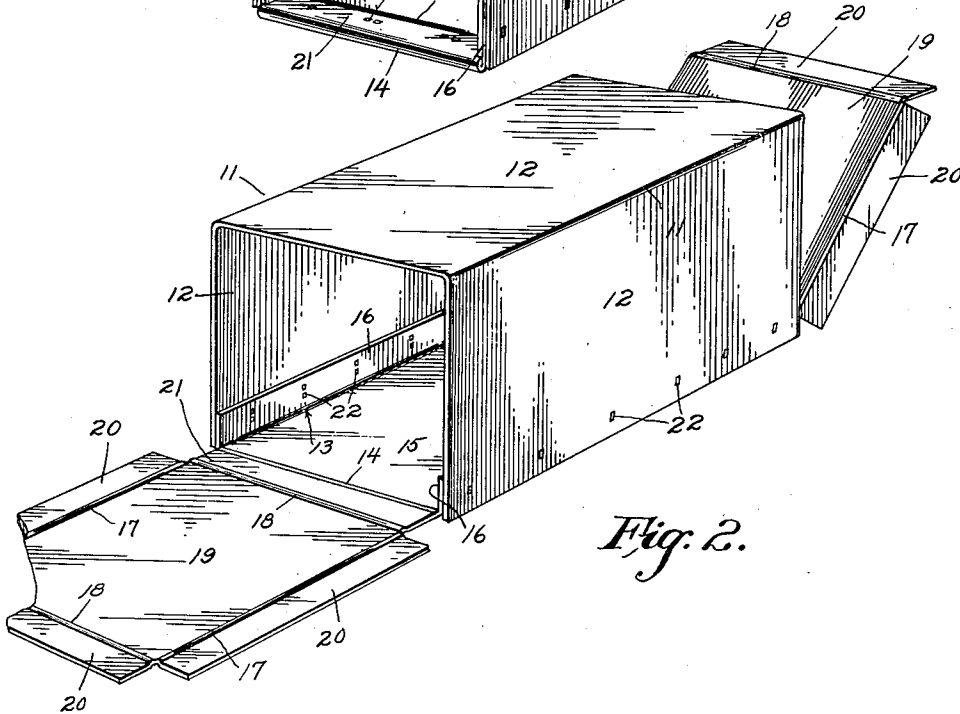
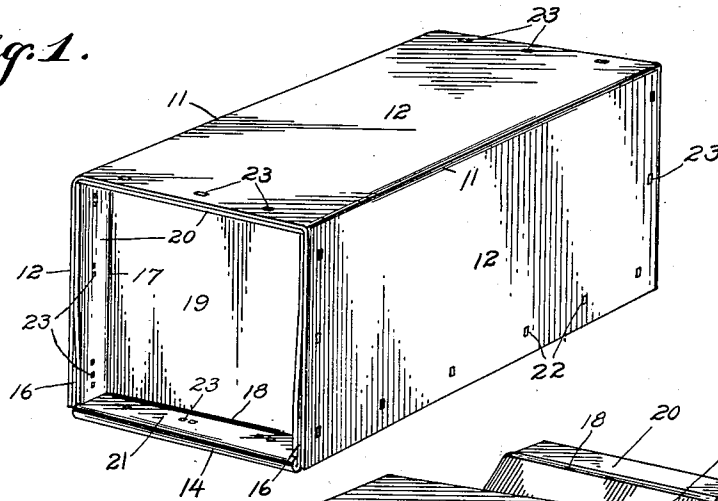


Fig. 2.

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Fig. 4.

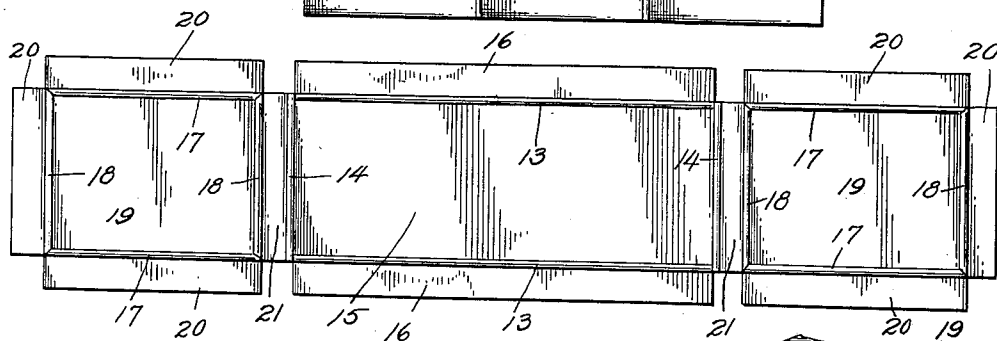
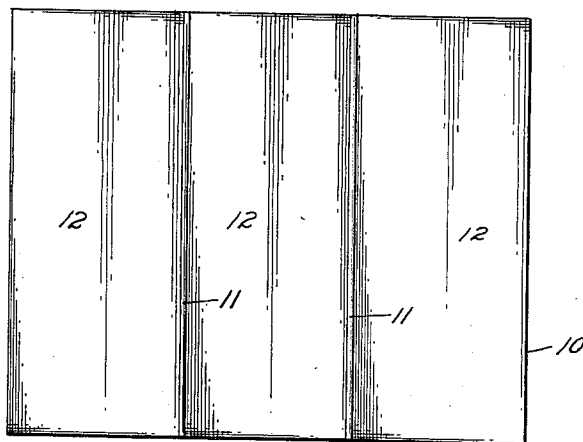
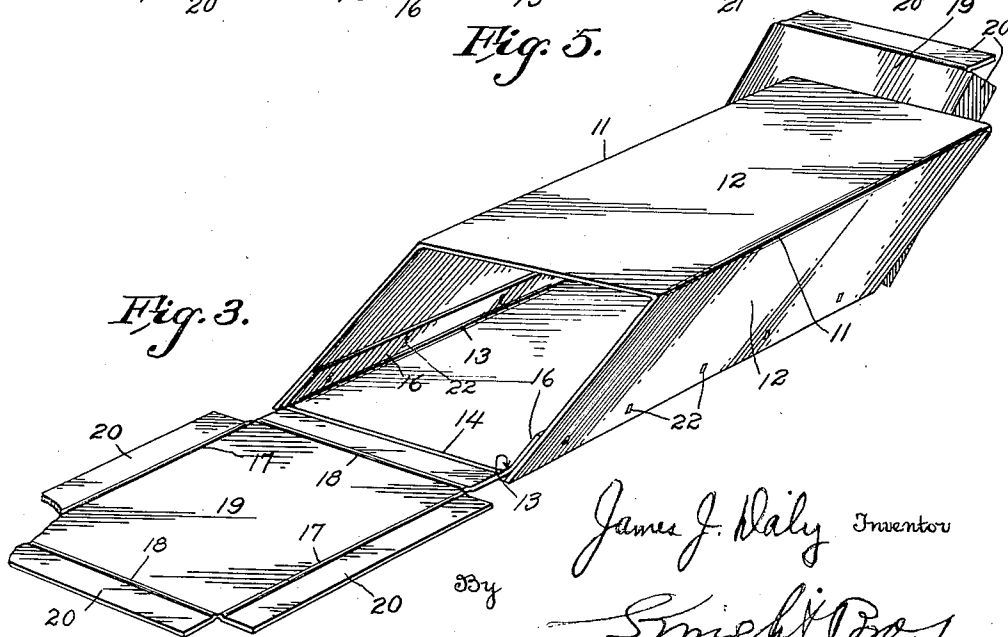


Fig. 5.

Fig. 3.



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Fig. 6.

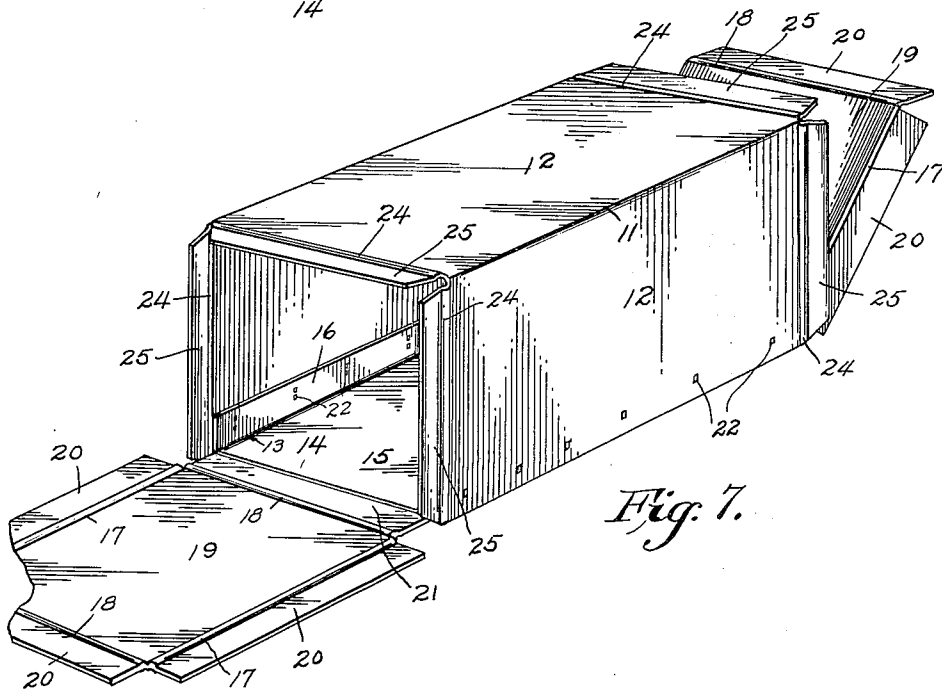
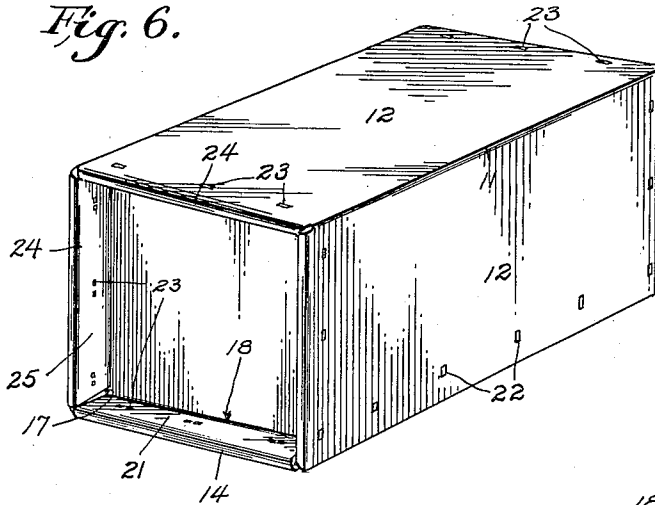


Fig. 7.

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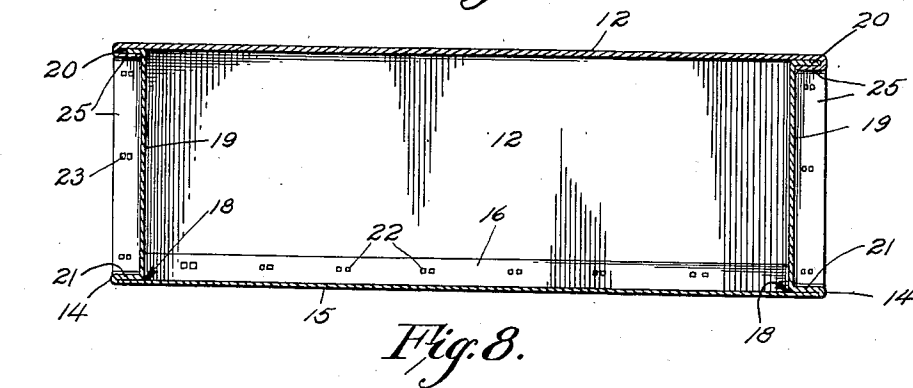
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FIBER SHIPPING CASE

Filed Feb. 7, 1922

4 Sheets-Sheet 4



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UNITED STATES PATENT OFFICE.

JAMES J. DALY, OF THREE RIVERS, MICHIGAN.

FIBER SHIPPING CASE.

Application filed February 7, 1922. Serial No. 534,712.

To all whom it may concern:

Be it known that I, JAMES J. DALY, a citizen of the United States, and a resident of Three Rivers, in the county of St. Joseph and State of Michigan, have invented certain new and useful Improvements in Fiber Shipping Cases, of which the following is a specification.

My invention relates to fiber shipping cases or boxes of the collapsible or knock-down type.

This invention relates particularly to improvements in boxes or shipping cases made of cardboard, strawboard, fiber or other similar material which is of such a stiff and rigid construction as to enable them to withstand the rough usage in handling and transit to which they are subjected and which will properly protect the contents packed therein.

Collapsible or knock-down containers of this general type have come into extensive use by reason of their advantageous characteristic in taking up little room when in collapsed or knock-down condition, so that a large supply of these containers may be kept on hand without utilizing an excessive amount of storage space. However, heretofore boxes of this general type have been of such complicated construction that the cost of manufacture, owing to the difficulty in cutting and assembling has been prohibitive.

It is therefore the primary object of my invention to provide a collapsible box or shipping case which will be strong and durable and which will comprise a smaller number of sections or parts, this present invention illustrating a container formed in two parts, thus enabling the same to be cheaply manufactured and conveniently assembled.

In carrying out my invention, I provide one section scored so as to be folded to form three sides of the container while the other section comprises the ends and one side. After the sections have been properly cut and scored, the tube-like body is formed by securing the single side panel to the ends of the section comprising the other three sides, the result being that of a tube, the ends being left unattached, save by their integral connection with one of the side panels.

The open ended tubular box may be collapsed or folded flat in compact condition for convenient storage or shipment. When

it is desired to fill the containers, the tubular body is opened or unfolded and one end panel folded into closing position and stitched in place. The container is then filled and packed and the second end folded into place and stitched fast.

The strength and durability of the container is assured first because the number of parts to be assembled have been reduced to a minimum and secondly, because all of the parts work on a continuous fold.

The manner of constructing and the method of assembling my improved containers will be made more apparent in the accompanying specification and illustrated in detail in the drawings, in which:

Fig. 1 is a perspective view of a container constructed in accordance with my invention,

Fig. 2 is a perspective view of the container with the ends thereof open,

Fig. 3 is a perspective view of the container partly collapsed,

Fig. 4 is a blank of one section of the container,

Fig. 5 is a blank of the other section of the container,

Fig. 6 is a perspective view of a slightly modified form of my container,

Fig. 7 is a perspective view of the form of container shown in Fig. 6 with the ends open,

Fig. 8 is a longitudinal vertical section taken on lines 8—8 of Fig. 6,

Fig. 9 is a blank of one section of the container shown in Fig. 6 and

Fig. 10 is a blank of the other section shown in Fig. 6.

Referring now more particularly to Figs. 1 to 5 the first form of my invention will be described. The container is formed of two sections, the blank 10 of which is scored at 11 to form three side panels 12. The blank of the other section is scored longitudinally as at 13 and transversely as at 14 to form a fourth side 15 and a pair of longitudinal flanges 16. This section of the blank is further scored longitudinally at 17 and transversely at 18 to form ends 19. Because of the shape of the blank and in consequence of the scoring there is provided along three sides of each end 19 flanges 20. Between the scores 14 and 18 there is left an area 21 adjacent each end of the side 15 which is of the same width as the flanges

20. The areas 21 are, in effect, connecting strips or flanges between the end panels and the fourth side panel which are designed to fold back upon the side 15 when the ends are folded into position, all of which will appear more fully hereinafter.

Referring now more particularly to Figs. 2 and 3, I will describe the method of assembling my improved container. The blank 10 is folded along the longitudinal scores 11 until it assumes the shape illustrated clearly in Fig. 2 and is then secured by stitching or otherwise to the longitudinal flanges 16 formed on the fourth side panel 15. In accomplishing this, the container may be passed through a stitching machine or machines, which will stitch both sides simultaneously. In the drawings the stitching for securing the blank 10 to the side 15 is indicated by the reference character 22.

The container now resembles an open-ended tube, the ends 19 being unattached save by their integral connection with the fourth side panel 15. In this condition the containers may be collapsed to a flattened or compacted condition and stored until it becomes necessary to use them. In Fig. 3 the container is shown in a semi-collapsed condition, the tube-like container bending at the edges formed by the longitudinal scores 11 and 13.

When the containers are to be packed they are unfolded to the position illustrated in Fig. 2 whereupon they may be readily packed and the ends thereafter folded into position. In folding the ends, the flanges 20 are bent outwardly, see particularly Figs. 2 and 3, and the ends folded up along the scores 14, the areas or stops 21 disposed between the ends 19 and the side panel 15 bending back upon the side panel 15 as clearly illustrated in Fig. 1.

As hereinbefore mentioned, the width of the strip 21 is the same as the flanges 20 so that the ends 19 fit snugly within the ends of the tube, with the outer edges of the flanges 20 extending even with the ends of the tube. In this position, the ends are secured in place by a stitching machine or the like, the stitches herein being indicated by the reference character 23.

Obviously one end of the box may be folded into position and stitched in place before the packing operation is commenced, access to the interior of the container being had through the other open end and when thereafter the container is to be closed, this end may be folded into place and stitched in the manner described before.

Referring now more particularly to Figs. 6 to 10, the second form of my invention will be described. This modification differs from the form of my invention previously described only in the fact that the blank 10 forming the three sides is provided with

transverse scores 24, thereby forming reinforcing flaps 25. The remaining parts of the container remain the same and hence like numerals refer to like parts.

In assembling the modified form of the container the tube-like body is connected in the same manner as described hereinbefore. However, when the ends 19 are folded into place the outer edges of the flanges 20 lie parallel with the scores 24 and when stitching the ends the flaps 25 are folded inwardly over the flanges 20 as clearly illustrated in Figs. 6 and 8. This modified form of my invention is capable of withstanding still greater strains and stresses because of the added strength and rigidity contributed by the flaps 25. The manner of packing the container in this instance may likewise be accomplished either with both ends 19 open or with one end thereof closed.

The rigidity of the box is furthermore assured by the arrangement wherein a flanged end is countersunk or entirely inserted within each end of the tube-like body. Obviously before the ends are inserted the body may be collapsed by folding along the scores 11 and 13 but when the box has been unfolded to its extended position and the flanged ends inserted the tube-like body is positively held in its unfolded or extended condition. By forming the flanges 20 and providing the strip 21, which folds back upon the fourth side panel 15, the ends may be conveniently stitched by running each hollow end through the stitching machine.

Obviously the blank 10 may be formed a little larger and scored to provide flanges on both sides thereof corresponding to the flanges 16 formed on the fourth side panel 15 whereby connection between the two blanks may be made. This and various other obvious modifications may be resorted to without departing from the spirit and scope of my invention and to this end I reserve the right to make such changes in the structure and method of assembling as may come within the purview of the accompanying claims.

Having thus described my invention, what I claim is:

1. A collapsible box of the type having countersunk ends, comprising two attached sections of sheet material, one section being formed with three side panels defined by intervening scored fold lines, and the second section being formed with a fourth side panel and two integral end panels connected by folding strips or flanges, and short inwardly folding attaching flanges upon said fourth side panel and said end panels, all of said flanges being defined by scored fold lines, the two box sections being secured together by attaching said short side flanges of said fourth side panel to the inner faces of the adjacent side panels of the other box section.

2. A collapsible fiber shipping case formed of two blanks, one blank being scored to form three sides, the second blank being scored to form a fourth side with relatively short attaching flanges and two ends with attaching flanges, said first blank being secured to the fourth side by stitching the same to the outside of said relatively short attaching flanges, said ends being adapted to be bent into the open ends of said body and secured thereto by stitching their associated flanges to said body.

3. A collapsible fiber container formed in two sections, one section being scored and 15 folded to form three sides, the other section being scored to form the fourth side with relatively short longitudinal attaching flanges and further scored to form two ends provided with attaching flanges, the three sides 20 being secured to the fourth side along their longitudinal edges by attachment to the rela-

tively short longitudinal attaching flanges, said attaching flanges extending between said side walls, thereby forming an open-ended tube, said ends being adapted to be 25 folded into the open ends of said tube and secured through the medium of their associated attaching flanges.

4. A collapsible fiber container formed in two sections, one section being scored and 30 folded to form three sides and reinforcing flaps, the other section being scored to form the fourth side and two ends with associated attaching flanges, said first section being secured to the fourth side by attaching the 35 same to the associated flanges, thereby forming an open-ended tube, said ends being adapted to be bent into the open ends of said tube and the reinforcing flaps folded to enclose the attaching flanges associated with said ends.

JAMES J. DALY.