May 12, 1936. I. N. JORDAN 2,040,313

SHIPPING CASE

Filed Jan. 14, 1933

Fig. 1.

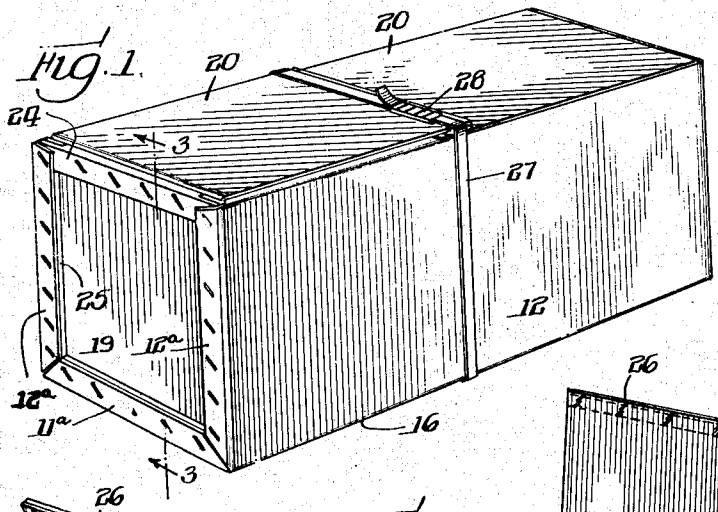


Fig. 3.

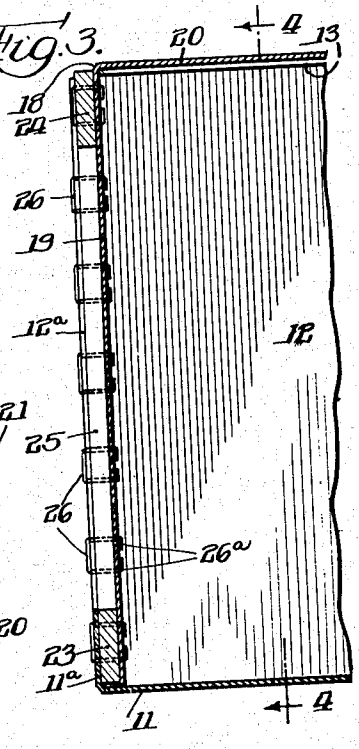


Fig. 2.

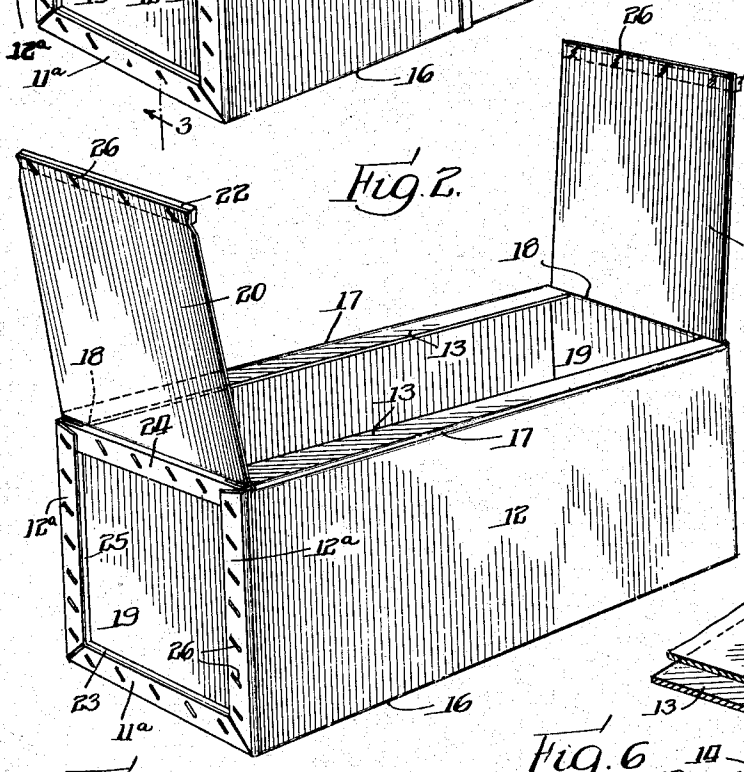


Fig. 5.

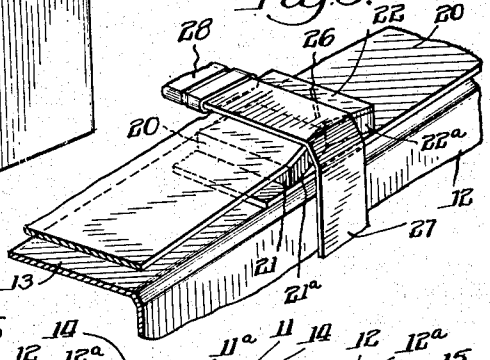


Fig. 4.

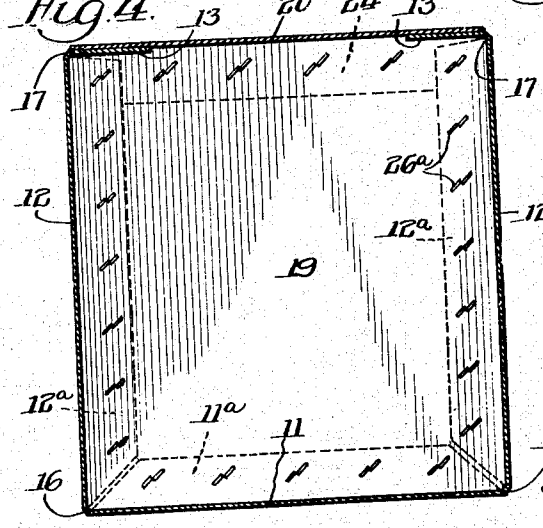
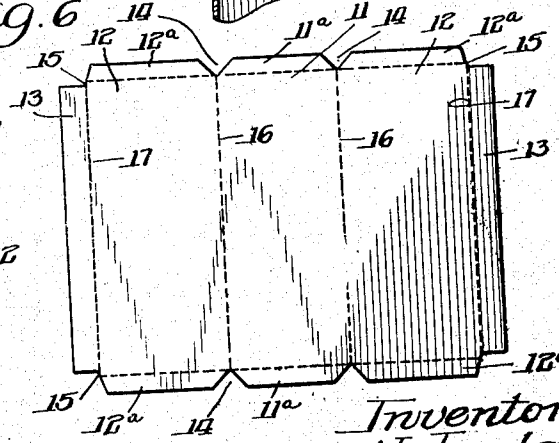


Fig. 6



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2,040,313

SHIPPING CASE

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Application January 14, 1933, Serial No. 651,710

3 Claims. (Cl. 229—47)

This invention has to do with the utilization of fibreboard and similar light and tough materials in the manufacture of shipping cases and has for its primary objects the strengthening of such cases to enable them to withstand rough usage and support heavy contents without adding materially to the weight of the case itself.

A further object is the provision of a secure but readily releasable closure arrangement whereby the case may be readily opened for inspection or removal of a portion of the contents without impairing its fitness for reuse.

Yet a further object is the provision of a convenient grip for handling the heavily loaded case.

While not limited to such field of employment the shipping case of my invention is especially adapted for transportation of meats in the packing industry. Meats such as hams, shoulders and pork loins are usually shipped in units of 100 lbs. and the weight constitutes a large relation to bulk. Moreover, being made up of pieces the contents are not mutually supporting and the integrity of the shipment unit is largely dependent upon the resistance of the container to deformation.

In the interest of economy as to transportation rates, ease of handling and material cost, heavy shipping cases are disadvantageous.

Fibreboard shipping cases are not per se new but they have not satisfactorily met the conditions outlined because of difficulty in effecting a secure readily releasable closure, for the reason that the reinforcement necessary to strength and resistance to deformation has hitherto been associated with an undue increase of weight, and further by reason of the smooth sides and corners of such cases they are not readily handled when heavily laden.

My invention therefore resides in the features of construction whereby are attained the objects hereinabove recited along with other advantages which will be apparent from the disclosure in the description following and in the accompanying drawing illustrative of a preferred embodiment of the invention.

In the drawing,

Fig. 1 is a perspective view of a shipping case in closed condition;

Fig. 2 is a similar view in open condition;

Fig. 3 is a fragmentary longitudinal sectional view on the line 3—3 of Fig. 1;

Fig. 4 is a transverse sectional view on the line 4—4 of Fig. 3;

Fig. 5 is a perspective fragmentary detail of the closure; and

Fig. 6 is one of the fibreboard blanks entering into the construction of the case.

Referring to the preferred embodiment of the invention as illustrated in the drawing, a length of fibreboard is blanked as shown in Fig. 6 to form the bottom 11 of the case, the two side walls 12 and the flanges 13. At points corresponding to the corners the material is mitered to provide notches 14 and adjacent the ends to provide substantially right-angular notches 15. The blank is bent along the lines 16 at right-angles to form the lower longitudinal corners of the case and along the lines 17 at right-angles to bring the flanges 13 into position parallel with the bottom of the case and overlying the open interior. Those portions of the longitudinal edges defined by the notches 14 are bent at right-angles to form flanges 11*a* and 12*a* as most clearly shown in Figs. 1 and 2.

Two other elongated rectangular sheets of fibreboard are transversely bent intermediate their lengths as indicated at 18 in Fig. 2 to form end portions 19 and top portions 20 for constituting respectively the end walls and top walls of the case. The end portions 19 are of a width corresponding to that of the bottom 11 and of a height corresponding to the depth of the case, while the top portions 20 are of a length slightly greater than one-half the overall length of the case so that when bent downward to overlie the side wall flanges 13 such top portions will overlap to a limited extent. One of the top portions 20 has a cleat 21 transversely stitched to the free end thereof upon its underside whereas the other top portion 20 has a similar cleat 22 transversely stitched along the free edge and on the upper side thereof for a purpose hereafter to be elucidated.

In order to reinforce the fibreboard structure of the case and to provide a hand grip for easy handling of the same, there is provided a rectangular frame of wood comprising upper and lower horizontally extending elements 23 and 24 and side vertical elements 25. The bent-over portions 11*a* and 12*a* of the bottom and side walls of the case are caused to overlap the outer faces of the lower horizontal frame element 23 and the two vertical frame elements 25 while the end wall portion 19 is seated in the space bounded by the bottom 11 and the side walls 12 against the inner faces of the four frame elements 23, 24 and 25. Thereupon the bottom, side and end walls of the case are securely connected to each

other and to the reinforcing frame by a series of stitching staples 26 extending inwardly through the wood frame elements and the fibreboard wall elements and clinched upon the inside as indicated at 26a in Fig. 3.

Thus it will be seen that the reinforcing frame members may be of a minimum thickness, a fraction of an inch, and yet present effective resistance to deformation of the case while affording a handhold by which the case may be lifted and the sustaining of the weight distributed to the case as a whole, while there are left no raw edges liable to be engaged by adjacent cases.

Reference has hitherto been made to the fact that lid portions 20 overlap to a limited extent and are provided with transverse cleats 22 stitched to the lower and upper faces respectively of the portions 20. These cleats are so located relative to the case ends and each other that the edges thereof adjacent the respective ends of the case substantially coincide whereby they will interlock against movement longitudinally of the case. That is to say, when the lid portion 20 on the cleat 22 is folded down upon the flanged portions 13 of the side walls, its cleat 22 will be upon the upper face thereof; and when the lid portion 20 is then folded down to the same position, its cleat 21 will extend beyond the cleat 22 as most clearly shown in Figs. 1 and 5, thus presenting an interlock or interengagement to prevent longitudinal shifting and disassociation of the lid portions.

The case is securely held in closed position by a metallic strip or band 27 extending about the case in its medial portion and enveloping the bottom and side walls and lid portion, the ends being secured by any appropriate form of seal 28 for holding the ends of the band together. In order to prevent any shifting of the band 27 out of engaging relation to the cleats 21 and 22, the ends of these cleats are slightly beveled as indicated at 21a and 22a so that together they present an exteriorly obtruse, reentrant angle. As the band 27 is drawn tightly about the case in overlapping relation to the cleats 21 and 22, it becomes seated within said angle and is thus prevented from shifting from above the cleats.

When it is desired to open the case for inspection or for removal of the contents in whole or in part an authorized person will break the seal 28 and remove the band 27, whereupon the lid portions may be swung to the open position indicated in Fig. 2. Upon reclosing the lid members are dropped into the position shown in Figs. 1 and 5 and another band is passed about the median portion of the case above both cleats 21 and 22 and is drawn into position and resealed.

It will be observed that the bottom and side walls are firmly associated with the end walls and securely connected by lines of stitching to the reinforcing frame; that the inner edges of the frame elements are available exteriorly of the case as a hand grip in any position of the case; that the flanged portions 13 of the side walls 12 break joints with the edges of the lid members and prevent the entrance of foreign matter; that the flanges 13 serve to reinforce the side walls laterally; that the interlocking cleats upon the overlapping ends of the lid members also overlie the flanges and side walls whereby the case is strengthened against the load of superimposed cases; that the interlocking engagement of the cleats 21 and 22 hold the lid members securely against withdrawal from beneath the binding strap, while the beveled ends of the cleats prevent shifting of the strap band from above the cleats. Thus the shipping case of my invention possesses all of the advantages hereinabove outlined, together with others of decided importance in shipping cases readily apparent to manufacturers and users of cases employed in transportation.

I claim:

1. In a shipping case, fixedly connected flexible side and bottom and end walls, a lid comprising two members hinged to one pair of the opposite walls and overlying the other opposite walls, the lid members having aggregate dimensions slightly greater than one-half the distance separating the walls to which they are hinged whereby they will meet and overlap each other, and means to secure said lid members against disassociation from each other and from the side and end walls in closed condition, said means comprising cleats secured one to each of the meeting ends of the lid members one underneath and the other above and at such distances from the ends of the case that the cleats will overlap and interlock against longitudinal shifting, the cleats bridging the space between the side walls of the body member and their ends being beveled to present a reentrant exteriorly obtuse angle, and a tie surrounding the body member and overlapping the cleats and seated within the angle of the cleat ends.

2. In a shipping case, a body member comprising bottom and side walls, two end members each having a width and height corresponding to the transverse dimensions of the body member, a pair of lid members each having a width corresponding to the width of the body member and a length slightly more than one-half the length of the body member, said lid members hingedly connected to the end members, reinforcing frames of rigid material each comprising horizontal upper and lower and vertical side elements, said frame having outside dimensions corresponding to the inside dimensions of the body member, the ends of the walls of the body portion overlapping the side and lower frame elements and folded upon the outer faces thereof and secured thereto, the end members secured to the inner faces of the frame elements, the lid overlying the upper edges of the body member, and means for securing said lid members against longitudinal disassociation from each other in closed position, said means comprising cleats secured one to each of the meeting ends of the lid members one underneath and the other above and at such distances from the ends of the case that the cleats will overlap and interlock against longitudinal shifting, the cleats bridging the space between the side walls of the body member and their ends being beveled to present a reentrant exteriorly obtuse angle, and a tie surrounding the body member and overlapping the cleats and seated within the angle of the cleat ends.

3. In a shipping case of fibreboard or similar light flexible fabric, a body member comprising integral bottom and side walls with the latter flanged to partially overlie the open top, two end members having a width corresponding to the inside width of the body member, a pair of lid members each having a width corresponding to the inside width of the body member and a length slightly more than one-half the length of the body member, reinforcing frames of wood each comprising horizontal upper and lower rails and vertical side stiles, said frame having outside dimensions corresponding to the inside dimensions of the body member, the ends of the side

and bottom walls of the body portion overlapping the stiles and the lower rail of the frame and folded upon the outer faces thereof and stitched thereto, the end members stitched to the inner faces of the frame elements and hingedly connected to the lid members, the two lid members overlying the upper edges of the body member, and means for securing the overlapping ends of the lid members against longitudinal disassociation in closed position, said means comprising cleats secured one to each of the meeting ends of the lid members one underneath and the other above and at such distances from the ends of the case that the cleats will overlap and interlock against longitudinal shifting, the cleats bridging the space between the side walls of the body member and their ends being beveled to present a reentrant exteriorly obtuse angle, and a tie surronding the body member and overlapping the cleats and seated within the angle of the cleat ends.

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