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P. S. PROCISSI ET AL

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COLLAPSIBLE BOX

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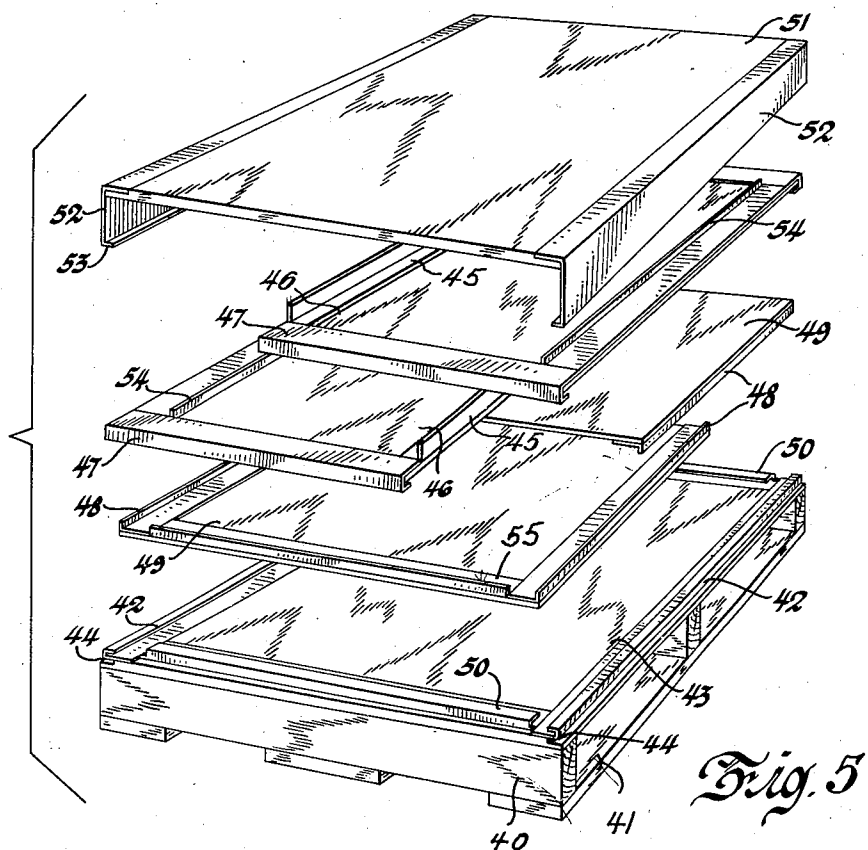


Fig. 5

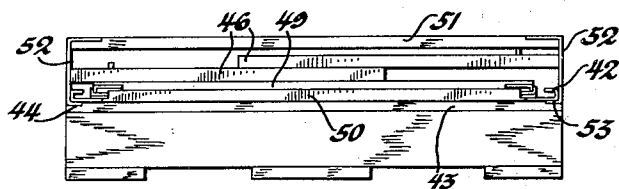


Fig. 6

Inventors
Paul S. Procissi &
Raymond M. Butler
By
Blackmore, Spencer & Flint
Attorneys

UNITED STATES PATENT OFFICE

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COLLAPSIBLE BOX

Paul S. Procissi and Raymond W. Butler, Flint,
Mich., assignors to General Motors Corpora-
tion, Detroit, Mich., a corporation of Delaware

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1 Claim. (Cl. 217—12)

This invention relates to shipping devices and more particularly to an improved knockdown container usable, for example, for transporting raw material or finished parts to or from a manu-
facturing plant and which when not in use can
be stored or shipped in collapsed space saving
form.

An object of the invention is to provide a lift truck receiving base or pallet on which the side and end walls are detachably secured and fixed together against accidental displacement when assembled for enclosing the material to be shipped.

A further object is to provide enclosing walls which can be easily and quickly disconnected and stacked flat on top of one another for return shipment and storage.

Another object is to provide a box closure lid arranged for connection with the pallet in the knockdown position of the side and end walls.

Additional objects and advantages will become apparent during the course of the following specification having reference to the accompanying drawings wherein Figures 1 and 2 are, respectively, side and end elevations of an assembled shipping container; Figures 3 and 4 are sections taken on lines 12—12 and 13—13 of Figure 1; Figure 5 shows in perspective the several units of the box disassembled and Figure 6 shows these units laid on top of one another with the lid engaging the pallet and holding the side and end walls therebetween.

Referring to the drawings it will be seen that a six sided enclosure is illustrated including a pair of side walls, a pair of end walls, a top wall and a bottom wall. The walls may be of wood, metal or other suitable material having attachment devices for their interconnection in predetermined relation. In the arrangement of Figure 1 the bottom wall is in the nature of an assembled unit of wood planks and may be termed a pallet which supports the load in spaced relation to the floor and by reason of the under space provides for the reception of the elevator or loading fork of the conventional factory lift truck. The longitudinally extending bed board or boards indicated at 43 are secured to and rest upon transversely projecting supporting and connector ties 40 located at spaced intervals and braced by the floor skids or runners 41 nailed on the underside of the ties 40. It will be noted that the transverse ties 40 constitute spacers between the runners 41 and the bed 43 and afford an open pocket to receive the lift platform of the material handling truck by which individual containers either as-

sembled or knocked down are moved and stacked.

The two side walls are identical. Each includes a panel 46 having along its lower edge a longitudinally slidable connection with the pallet. The connection preferably runs throughout the length of the panel 46 and comprises mating telescopic or dovetailing tongue and groove strips secured, respectively, to the panel 46 and bed 43. The interfitting connections include two strips, one being of J-shape in section to afford a groove and the other being of L-shape in section to afford a tongue, and while these parts may be joined by a longitudinal telescoping action they are better adapted for a shorter movement transverse to their length in the assembly or disassembly of the container. One of the J-sectioned strips, as seen at 42, is fastened along each longitudinal edge of the bed 43 of the pallet; the top surface of the bed being rabbeted in two steps with the longer leg of the strip inset in the upper offset and projected above the lower offset for cooperation therewith in providing an outwardly opening groove indicated at 44 for a purpose later to be referred to. The shorter leg of the strip 42 forms a reversely bent portion and an inwardly opening groove in which is fitted the outturned lateral leg of the L-sectioned strip 45 carried through its other leg by the side wall 46. Along each vertical edge of both side walls, as best seen in Figure 4, is a J-sectioned strip 47 providing an inwardly opening groove to receive the outturned leg of the L-sectioned strip 48 at the adjacent vertical edge of an end wall 49. The lower edge of each end wall may be engaged behind the reversely bent lip of a strip 50 carried along the edge of the bed 43. Along the upper margin of each end wall 49 is mounted an edge reinforcing metal angle strap 55. The sliding top 51 in this instance has along each side a dependent skirt 52 terminating in an inturned flange 53 to run under a longitudinally extending retaining rail 54 fastened to the side wall near the upper edge thereof. Sliding friction ordinarily will be sufficient to prevent accidental displacement of the cover but if desired a conventional padlock hasp may be added to retain the lid against unauthorized removal and with the lid of proper length to overlie both end walls the material within the container will be reasonably safe against theft.

With the lid removed the container is open for loading and unloading. When not in use as a container and to conserve space the lid and vertical walls are detached from each other and stacked on top of the pallet as seen in Figure 6.

The dependent skirt 52 is of such dimension that when the side and end walls are stacked on the pallet the intumed flanges 53 may be engaged and slid through the grooves 44 of the bed and thereby keep the parts together. Here again frictional contact may be relied upon to hold the units against separation but a positive anchor can be added by passing removable pins through aligned openings in the parts as, for example, through opposite ends of the cover 51 and bed 43.

We claim:

A collapsible container including a lift truck receiving pallet, having a groove in its top surface along each side, a strip mounted on the pallet in overlying cooperating relation to each 15

5 groove to provide an outwardly opening channel and being of J-shape in section to afford an inwardly opening channel above the top surface of the pallet, a pair of side walls, each having adjacent its bottom edge a lateral projection for reception in the inwardly opening channel, a pair of detachable end walls and a lid having a dependent side portion terminating in an inwardly projecting flange slidably engageable with an upper portion of the side wall in the assembled relation of the parts and slidably engageable with the outwardly opening channel of the pallet in the knockdown position of the parts.

PAUL S. PROCISSI.

RAYMOND W. BUTLER.