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SHIPPING PACKAGE AND PALLET MEANS

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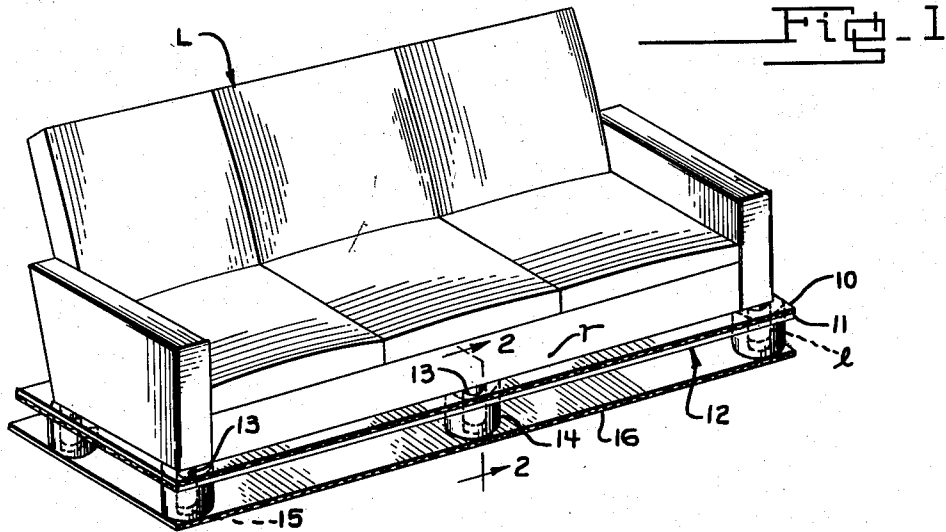


Fig. 1

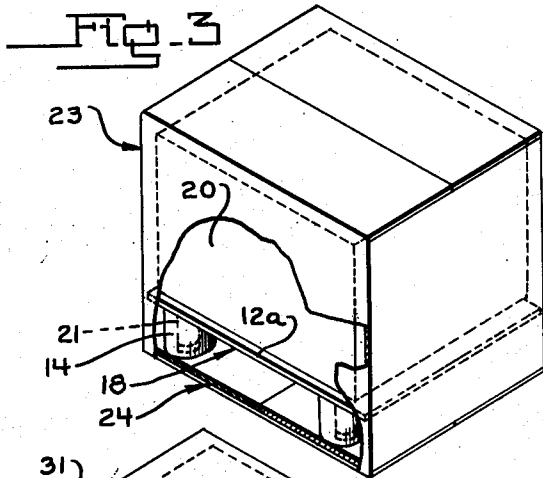


Fig. 2

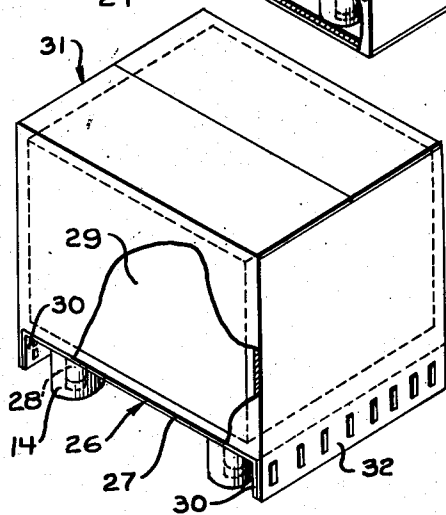
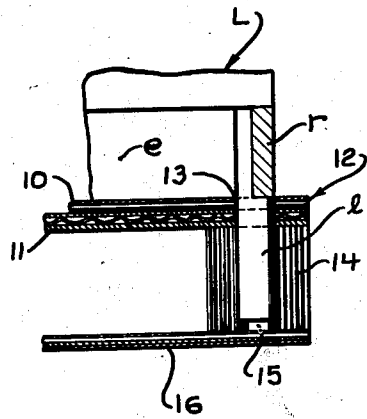


Fig. 4

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SHIPPING PACKAGE AND PALLET MEANS

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2 Claims. (Cl. 206—46)

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This invention relates to the shipment and handling of articles of furniture and analogous articles, and has to do with package and pallet means whereby such articles may readily be handled by fork lift trucks and may be enclosed, for shipment, within a container effective for guarding the packaged article against injury.

In shipping furniture, particularly large or heavy articles of furniture, such as lounges, desks, and articles of like character, damage frequently is caused by breaking off of legs or other projections of such articles in shipment. That is so prevalent, under present methods of crating and shipping furniture, that many of the larger furniture dealers and manufacturers have crews of men detailed to applying to furniture which has been shipped legs which have been broken off during shipment.

My invention is directed to the packaging and handling of articles of the character above referred in such manner as to reduce to a minimum likelihood of damage thereto during handling or during transit. To that end, I provide a pallet of special construction adapted for use with a fork lift truck, this pallet being particularly suitable for use with a carton or like shipping container and serving, when so used, to anchor the packaged article against objectionable movement within the carton or shipping container. The pallet of my invention is adapted for use with a fork lift truck, to facilitate handling of an article mounted on the pallet with resultant reduction of likelihood of injury to the article in handling thereof. Further, the pallet of my invention is provided with tubular supporting members adapted to receive the legs or like projections of an article mounted on the pallet, such supporting members guarding the legs or projections of the article against injury and also serving to restrain the article on the pallet platform against transverse movement relative thereto. Further objects and advantages of my invention will appear from the detail description.

In the drawings:

Figure 1 is an isometric side view of a pallet embodying my invention with an article of furniture, such as lounge, mounted thereon;

Figure 2 is a sectional view, on an enlarged scale, taken substantially on line 2—2 of Figure 1, certain parts being shown in elevation;

Figure 3 is an isometric side view of an article packaged for shipment in accordance with my invention, the article being mounted on the pallet of my invention and disposed therewith within a shipping carton, one side wall of the latter being in part broken away; and

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Figure 4 is a view similar to Figure 3 but showing a modified form of pallet embodying my invention and constituting the bottom closure wall or member of the carton, one side wall of the latter being in part broken away.

This application is a continuation in part of my copending application for Shipping Pallet and Container, filed December 6, 1947, Serial No. 790,207, now abandoned.

In constructing the pallet of my invention I provide two sheets 10 and 11 of suitable paper stock, preferably corrugated fibre board or cardboard, disposed with the corrugations of one sheet at right angles, or substantially so, to the corrugations of the other sheet. The sheets 10 and 11 are secured together in a suitable manner, conveniently by means of a suitable adhesive, and together constitute a load receiving platform 12. This platform 12 is of double thickness corrugated paper board, as will be clear, which is desirable in many cases, particularly when used in the handling or shipment of heavy articles of furniture. The platform 12 is provided with a plurality of suitably disposed openings 13 there-through. A plurality of posts or load supporting members 14 are suitably secured, conveniently by means of an appropriate adhesive, to the under face of platform 12 and extend downward therefrom. The posts 14 preferably are formed of corrugated fibre board or cardboard arranged in a plurality of substantially concentric juxtaposed layers with the corrugations thereof perpendicular to the platform 12. Conveniently, each of the posts 14 is formed of a strip or strips of corrugated paper board wound in the form of a flat spiral, or convolutely, into post form, the convolutions or elements of the posts thus produced being adhesively secured together. The load supporting members or posts 14 are disposed in rows lengthwise and transversely of the platform 12, which is of rectangular shape in plan as shown, and are suitably spaced for reception between them of the forks of a lift truck. The posts 14 are of proper height to permit ready entry of the forks of the truck beneath the platform 12, as will be understood. It will be noted that the posts 14 are of tubular construction, each defining an interior space 15 which may be of cylindrical shape, as shown, or of other shape, this space being open at its upper end and extending downward from the underface of platform 12.

Preferably, though not necessarily, I provide a second or lower platform 16, also formed of corrugated paper board, adhesively secured to the lower ends of the posts 14. The lower platform 16 serves as a bracing member which is of ma-

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terial assistance in resisting blows to which the posts 14 may be subjected. Further, the lower platform 16 closes the lower ends of the posts 14 effective for preventing entry of foreign articles or substances therein through the lower ends thereof.

The posts 14 are disposed in substantially concentric relation to the openings 13 in upper platform 12, with the inner spaces or bores 15 of the posts 14 in approximate register with openings 13 and providing spaces extending downward therefrom. An article of furniture, such as a lounge L, of known construction, having a front rail *r* and a similar back rail (not shown), with legs *l* extending downward a substantial distance below the rails, may be mounted upon the platform 12. For purposes of illustration, the downwardly extending portions of the legs *l* are shown as of cylindrical shape and uniform diameter. The openings 13 of platform 12 are suitably disposed and of proper diameter to receive snugly the downwardly extending portions of legs *l*, with the rails *r* resting upon the upper face of the platform 12, upon which the end rails *e* of the frame of the lounge L also rest.

The legs *l* of the lounge L extend downwardly into and fit snugly within the interior spaces 15 within the load supporting members or posts 14. The platform 12 and the posts 14 thus provide means for anchoring the lounge L against movement relative to platform 12, the latter, due to its construction of corrugated paper board, exerting a cushioning effect which reduces or minimizes jolts or jars to which the lounge might be subjected in handling and shipment. Further, the load supporting members or posts 14 provide enclosures for the downwardly extending legs *l* and effectively protect them against damage by impact or blows. The tubular posts 14 have walls of substantial thickness composed of a plurality of layers of corrugated paper board and are highly effective as a protective padding about the respective legs *l* of the lounge L, thereby greatly reducing likelihood of breakage of or damage to the legs during handling or shipment of the lounge. The second or lower platform 16 of the pallet effectively braces the posts 14 and also provides a closure for the lower ends thereof, thereby protecting the legs *l* of the lounge L against injury by foreign articles or materials entering the posts 14 through the lower ends thereof. As above noted, the lower platform 16 is not essential, but is preferred in pallets which are to be used for handling or shipping large or heavy articles. The pallet of Figure 1, with an article of furniture mounted thereon, such as the lounge L, constitutes a unit well suited to handling by lift fork trucks and which may be placed within a suitable carton or container for shipment.

In Figure 3 I have shown a modified form of pallet 18 which is similar to the pallet of Figure 1, except that it has no bottom platform and the top platform 12a is formed of a single thickness of corrugated paper board. An article of furniture 20, which may be a desk or cabinet, is mounted on platform 12a, with its legs 21 extending through platform 12a and downward into posts 14 of pallet 18. The pallet 18 and the desk or cabinet 20 mounted thereon are disposed as a unit within a paper board container or carton 23 of known construction and which preferably may be formed of corrugated paper board. The carton 23 is of such size that the side walls thereof and its top wall, formed by the usual

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closure flaps, are spaced from the sides and the top of the article 20, suitable inner packing (not shown) being disposed about the article 20, as is known. The bottom of carton 23 is closed by the usual closure flaps providing a bottom closure wall 24 upon which the posts 14 of pallet 18 seat. The pallet thus functions also as an inner packing for spacing the bottom of article 20 and legs 21 thereof above the bottom wall 24 of carton 23, it being noted that posts 14 of the pallet extend downward beyond legs 21 of article 20. Platform 12a of pallet 18 fits snugly within the carton 23 in contact with the side walls thereof so as to be restrained thereby against relative transverse movement. Since the legs 21 of article 20 extend through platform 12a into posts 14 of pallet 18, the article 20 is effectively restrained, by legs 21 thereof and posts 14, against transverse movement relative to the pallet 18, which is thus effective for holding article 20 against movement toward the side walls of carton 23. The carton 23 with the pallet 18 and the article 20 therein provides a package suitable for shipment and which effectively guards the article thus packaged. The closure flaps of the carton 23 are adhesively secured together as is usual, that providing sufficient safeguard in many cases where the article shipped is of comparatively light weight. If desired, particularly where the article being shipped is of considerable weight, the carton 23 may be reinforced by metal strapping secured thereabout, as is known, or in any suitable known manner.

In Figure 4 I have shown a second modified form of pallet 26 embodying my invention. This pallet comprises a load receiving platform 27 provided with openings suitably disposed for reception of the legs 28 of a desk, cabinet or analogous article 29 mounted on platform 27, the legs extending downward into posts 14, as before. The platform 27 is provided at two opposite sides thereof with downwardly extending flanges 30 of less height than the posts 14. The pallet 26 with the article 29 thereon is disposed, as a unit, within the paper board carton 31, preferably formed of corrugated paper board, which is, in general, of known construction, but is open at its bottom and is provided at two opposite sides thereof with downward extensions 32. These extensions 32 project downward along the flanges 30, at the outer faces thereof, and are secured thereto in a suitable manner, conveniently by stapling, with the other two side walls of carton 31 seating on platform 27 of pallet 26. The article 29 is spaced from the side walls of the carton 31 and is restrained against movement toward such side walls by the pallet in the same manner as in Figure 3. It will be noted that in Figure 4 the pallet itself constitutes part of the carton within which the article 29 is disposed, platform 27 of the pallet constituting a bottom closure wall for the carton. The carton 31 may be placed over the article 29 and the pallet 26 by lowering it into its position shown in Figure 4, and then secured in position by stapling extensions 32 to flanges 30. The inner packing may then be placed within carton 31 about article 29, after which the top of the carton is closed by means of the usual closure flaps. The resultant package effectively guards the article 29 therein and is well suited for handling with a fork lift truck. In that connection, it will be noted that flanges 30 are provided at two sides only of platform 27 of pallet 26, leaving the other two sides of the pallet unobstructed for insertion of the fork of a lift truck beneath platform 27.

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As indicated above, changes in detail may be resorted to without departing from the field and scope of my invention, and I intend to include all such variations, as fall within the scope of the appended claims, in this application in which the preferred forms only of my invention have been disclosed.

I claim:

1. In a shipping package, a substantially rectangular paper board load receiving platform having flat flanges at two opposite sides thereof substantially perpendicularly thereto and flush therewith, said platform having spaced openings therethrough, a plurality of tubular paper board load supporting members enclosed from top to bottom thereof and substantially concentric with said openings and defining inner spaces extending downward therefrom, said supporting members extending downward beyond said flanges for supporting said platform and a load thereon, the two other sides and the under face of said platform being open and unobstructed except for said supporting members for insertion beneath said platform of the forks of a lift truck, an article seated on said platform and spaced inward from the sides thereof, said article having legs fixed thereto and extending downward therefrom through said openings and fitting snugly within said supporting members, the latter extending downward beyond said legs, and a carton enclosing said article and platform, said carton having two side walls extending downward along and secured to said two flanges and two side walls disposed with their lower edges approximately in the plane of said platform at said two other sides thereof, said platform fitting snugly in said carton and in cooperation with said legs and supporting members restraining said article against relative movement transversely of said platform and thereby maintaining said article spaced from the surrounding walls of said carton.

2. In a shipping package, a substantially rectangular paper board load receiving platform having flat flanges at two opposite sides thereof

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substantially perpendicular thereto, said platform having spaced openings therethrough, a plurality of tubular paper board load supporting members secured to the under face of said platform and substantially concentric with said openings defining inner spaces extending downward therefrom, the two other sides and the under face of said platform being open and unobstructed except for said supporting members for insertion beneath said platform of the forks of a lift truck, an article seated on the upper face of said platform, said article having legs fixed thereto and extending therefrom through said openings and fitting snugly within said supporting members, the latter extending beyond said legs, and a carton enclosing said article and platform, said carton having two side walls extending downward along and secured to said two flanges and two side walls disposed with their lower edges approximately in the plane of said platform at said two other sides thereof, said platform fitting snugly in said carton and in cooperation with said legs and supporting members restraining said article against relative movement transversely of said platform.

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