

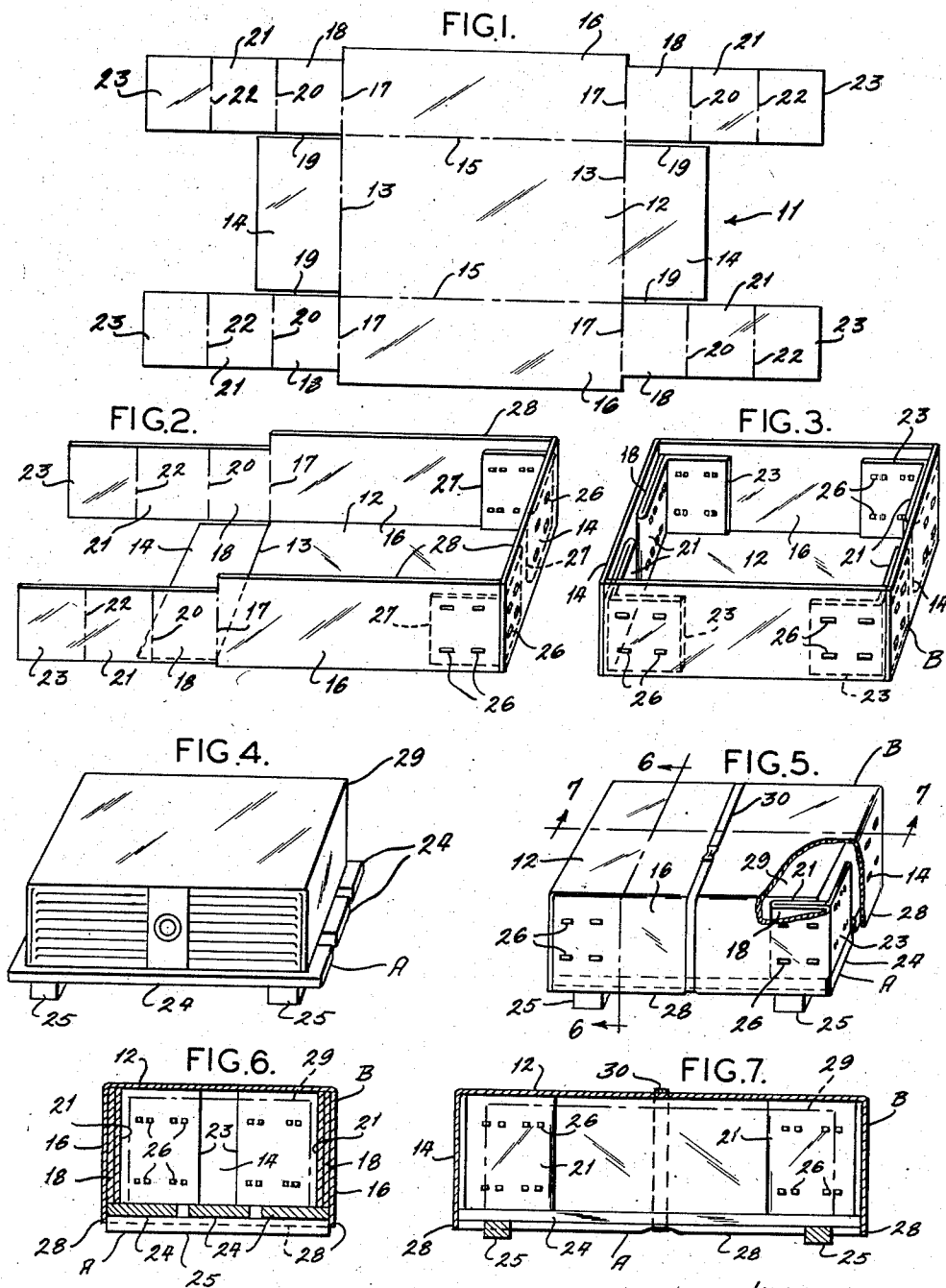
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REINFORCED CONTAINER FOR HEAVY ARTICLES

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REINFORCED CONTAINER FOR HEAVY ARTICLES

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This invention appertains to containers for storing and transporting heavy bulky articles, such as refrigerators, air conditioners and the like. Containers embodying this invention may be constructed of solid fibreboard, corrugated fibreboard or any other suitable material.

Heavy bulky items, such as air conditions, are customarily placed on rigid skid or supporting members constructed of wood, metal, or similar material. A protective covering member of fibreboard or other material is then placed over the bulky items and the skid or supporting member. The protective cover or container is ordinarily employed primarily for the purpose of maintaining the contents free from moisture, dust and other foreign matter which will be encountered in storage and shipment. Due to the ordinary inherent lack of stiffness and strength, the protective cover member is generally incapable of providing structural protection to the contents. In order to add additional strength and rigidity to the protective container, extrinsic interior reinforcing members are often employed. These interior members are often formed of built up, laminated corrugated or solid fibre members or other materials, such as wooden corner posts and the like.

The present invention has, as one of its primary objects, the use of a protective covering container of the type described having integral reinforcing members provided from the material from which the cover container is constructed for providing rigidity and strength beyond that ordinarily expected with covering containers of this type.

Another object of this invention is to provide a cover container for heavy bulky articles in which the unitary integral reinforcing members are spaced from the lower edge of the cover member to permit the cover member to be telescoped over the skid or supporting device. With this feature of the present invention, it is possible to place the novel cover member in telescoping position over the skid or supporting member and thereby properly orienting the cover member with respect to the other container parts without unnecessary manipulation or adjustment. The telescoping feature of the invention also permits a more contamination-proof fit between the cover member and the skid or supporting member. Also, since in practice the skid member and the cover member are secured together by girding bands or straps, the telescoping feature of this invention actually permits the strap or band to more tightly secure the lower margins of the cover member in contacting relation against the skid or supporting member edges than hereto possible with previous cover members of this type.

These and other objects and advantages of this invention will be apparent to those skilled in the art upon a full and complete understanding of the construction and operation of the device as hereinafter set forth.

The invention consists in the parts, arrangements and combination of parts hereinafter described and claimed. The accompanying drawings form a part of this specification and like numerals and symbols therein appearing refer to like parts wherever they occur.

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Fig. 1 is a plan view of a container cover blank embodying a preferred form of the invention;

Fig. 2 is a perspective view of a container cover member embodying the invention shown in a partially erected condition;

Fig. 3 is a perspective view of the container cover shown in Fig. 2 shown in a completely erected condition and illustrated with the cover member shown inverted to more completely disclose the parts of the invention;

Fig. 4 is a perspective view of an air conditioning unit shown securely fastened to a skid or supporting member;

Fig. 5 is a perspective view showing the cover member in telescoping position over the skid or supporting member;

Fig. 6 is a transverse vertical, sectional view along lines 6—6 of Fig. 5; and

Fig. 7 is a longitudinal vertical sectional view along lines 7—7 of Fig. 5.

The cover blank 11 shown in Fig. 1 is provided with a top panel 12 defined in part by a pair of end score lines 13 which also define the hinge connections of end cover panels 14. Side score lines 15 define the side margins of the top panel 12 and also the hinge connection of side cover panels 16. Continuations 17 of the end score lines 13 define hinge connections of inner reinforcing portions or panels 18 which are, in reality, extensions of the side cover panels 16. In the embodiment illustrated, end slots 19 are provided intermediate the inner reinforcing panels 18 and the end cover panels 14 and an intermediate score or fold line 20 defines the foldable connection between each inner reinforcing and intermediate reinforcing portion or panel 21. In a similar manner, an outer score 22 defines the hinge connection between each intermediate reinforcing panel and an adjacent outer portion or panel 23.

In the embodiment of the container blank 11 shown in Fig. 1, the width of the side cover panels 16 is substantially equal to the width of the end cover panels 14. This dimension will be more particularly described later in the specification. Also, the width of the inner reinforcing panels 21 and the outer reinforcing panels 23 is slightly less in width than the adjacent side cover panels 16. The reason for the variation in the width will be described more fully in a later paragraph of this specification.

A typical skid or supporting member A, as shown in Fig. 4, is customarily formed of longitudinal planks 24 secured by nails or other fastening means (not shown) to transverse cleats 25. The planks 24 and the cleats 25 are customarily formed of scrap lumber or similar materials.

The cover member 11 may be erected in any desired manner, however, a preferred form of erecting the blank is to fold each intermediate reinforcing panel 21 and each outer reinforcing panel 23 upwardly inwardly about the intermediate score 20 so that the intermediate panel 21 is in flatwise contacting relation with its adjacent inner panel 18 and the outer reinforcing panel 23 is in flatwise contacting relation with the end marginal face of the side cover panel 16. Each inner reinforcing panel 18 and its adjacent intermediate reinforcing panel 21 is folded right angularly upwardly with respect to the previously positioned outer reinforcing panel 23 and the side cover panel 16. With the reinforcing panels in this position, the side cover panels 16 are folded upwardly into right angular relation to the top panel 12. The end cover panels 14 are then also folded right angularly upwardly into right angular relation to the top panel 12 so that the inner faces of the end cover panels 14 are in contacting relationship with the exposed face of the inner reinforcing panel 18 as shown in Fig. 2. In this position, each outer reinforcing panel 23 is secured to the adjacent end portion of the side cover panels 16 by stitches 26, glue or other suitable

means. Similarly, each intermediate reinforcing panel is secured to adjacent portions of the end cover panel by means of stitches 26 or other suitable securing means.

In effect, the panels 18, 21 and 23 provide L-shaped corner reinforcing members having free edges 27 spaced from the lower edge margins 28 by a distance substantially equal to the vertical thickness of the longitudinal planks 24. A completed cover member B is shown in Fig. 3.

The skid or supporting member A is preferably dimensioned so that the length of the longitudinal planks 24 is equal to the interior length of the container, i. e., the distance between the inner faces of the end cover panels 14 of the cover member B. The longitudinal planks 24 are spaced so that the distance between the outer free edges of the planks forming the sides of the skid is substantially equal to the interior width of the cover member B, i. e., the distance between the inner faces of the side cover panels 16. The transverse cleat members 25 of the skid A may be of any desirable dimension. However, it is preferred that the cleat members 25 be of sufficient thickness to elevate the longitudinal planks a sufficient distance above the floor or other supporting surface to permit entry of lifting elements of mechanized materials handling equipment.

An air conditioning device 29 is placed on the skid A as shown in Fig. 4. Ordinarily, it is preferred to secure the heavy bulky item 29 to the skid A by means of threaded fastenings or bolts (not shown). It will also be noted that the skid member A is of substantially larger dimensions than the air conditioner or other bulky item 29 in order to provide sufficient clearance to permit the cover member B to be placed in position.

The cover member B is placed over the air conditioning device 29 and onto the skid member A as shown in Fig. 5. The cover member is telescoped over the edges of the longitudinal planks 24 until the free edges 27 of the reinforcing panels 18, 21 and 23 are in edgewise abutting engagement with the upper faces of the planks 24. In the particular embodiment described, the lower edge margins of the end cover panels and the side cover panels of the cover member B are preferably at least in co-planar relation with the lower surfaces of the planks 24. As shown in Figs. 6 and 7, it may be desired to extend the lower edge margins 28 downwardly below the planks 24. The container and skid may now be secured together by means of a girding strap or band 30, as best shown in Figs. 5 and 7. Ordinary steel strap is employed, however, wire, heavy twine or other means may be employed. The strap or band means 30 acts to tightly and immovably secure the cover member B to the skid member A so as to prevent accidental movement thereof.

As shown in Figs. 6 and 7, the reinforcing panels 18, 21 and 23 extend from the upper surface of the plank members 24 to the underface of the top panel 12 to thereby provide a column-like reinforcing corner member to not only reinforce and strengthen the corners of the cover member, but also add substantially to the vertical or stacking strength thereof.

Other embodiments of the invention may be employed if desired, for example, it might be desirable to vary the height of the end cover panels 14 and the side cover panels 16 to vary the exact position of the lower edge margins 28 with respect to the skid or supporting members. It is apparent that various dimensions of both the skid A and the cover member B may be varied to permit the device to conform to the side and shape of the particular article to be packaged. These and other embodiments and modified forms which are similar or equivalent to the embodiment described fall equally within the scope of the claims next appearing.

What I claim is:

1. A package for relatively heavy articles comprising a supporting pallet having a platform portion and a unitary protective cover member of rectangular configuration and having a top with foldably connected opposing side and end walls defining upstanding corners, the side walls being provided with integral foldably connected end and corner reinforcing extensions of less height than said side and end walls and having inner, intermediate and outer portions defined by transverse fold lines, each inner portion being disposed and fixedly secured in flatwise relation to the inner face of the adjacent end margin of the end walls, the intermediate portions being reversely bent and secured in flatwise relation to the inner portion and terminating adjacent the interior of the adjacent upstanding corner of the cover member, the outer portion extending from the corner of the cover member in flatwise, secured relation against the inner face of the adjacent side wall of which the extension is formed, the free, lower edges of the side wall extensions being disposed in substantially co-planar relation and spaced upwardly from the free bottom edges of the container side and end walls a distance substantially equal to the thickness of the platform of the pallet and positioned in flatwise abutting, load supporting relation to the upper face of the supporting pallet, the inner, lower marginal vertical faces of the side and end walls of the cover member being in contacting relation to the side edges of the supporting pallet and securing means for fixedly fastening the cover to the supporting pallet.

2. A package for relatively heavy articles comprising a supporting pallet having a platform portion and a unitary protective cover member of rectangular configuration and having a top with foldably connected opposing side and end walls defining upstanding corners, the side walls being provided with integral, foldably connected end and corner reinforcing extensions of less height than said side and end walls and having inner, intermediate and outer portions defined by transverse fold lines, each inner portion being disposed and fixedly secured in flatwise relation to the inner face of the adjacent end margin of the end walls, the intermediate portions being reversely bent and secured in flatwise relation to the inner portion and terminating adjacent the interior of the adjacent upstanding corner of the cover member, the outer portion extending from the corner of the cover member in flatwise, secured relation against the inner face of the adjacent side wall of which the extension is formed, the free, lower edges of the side wall extension being disposed in substantially co-planar relation and spaced upwardly from the free bottom edges of the container side and end walls a distance substantially equal to the thickness of the platform portion of the pallet and positioned in flatwise, abutting, load supporting relation to the upper face of the supporting pallet, the inner, lower marginal vertical faces of the side and end walls of the cover member being in contacting relation to the side edges of the supporting pallet and banding means encircling the cover and the supporting pallet to fixedly secure the package parts together.

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