

[54] **DISPOSABLE SKID**

[75] Inventors: **Howard M. Oglesby**, Evansville, Ind.; **Brian R. Smith**, Stevensville, Mich.

[73] Assignee: **Whirlpool Corporation**, Benton Harbor, Mich.

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Primary Examiner—Roy D. Frazier

Assistant Examiner—William E. Lyddane

Attorney, Agent, or Firm—Hofgren, Wegner, Allen, Stellman & McCord

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[58] **Field of Search** 248/19, 174, 346; 312/259, 312/260, 261; 206/386, 491, 320; 229/14 C, DIG. 2; 217/52, 53; 161/99, 103; 108/51-58

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[57] **ABSTRACT**

A disposable skid for use in temporarily supporting an appliance. The skid may be used during processing and/or shipment and is constructed to be discarded upon installation of the appliance. The skid is formed of a relatively soft corrugated material and includes reinforcing channels which are disposed within the corrugated material.

10 Claims, 4 Drawing Figures

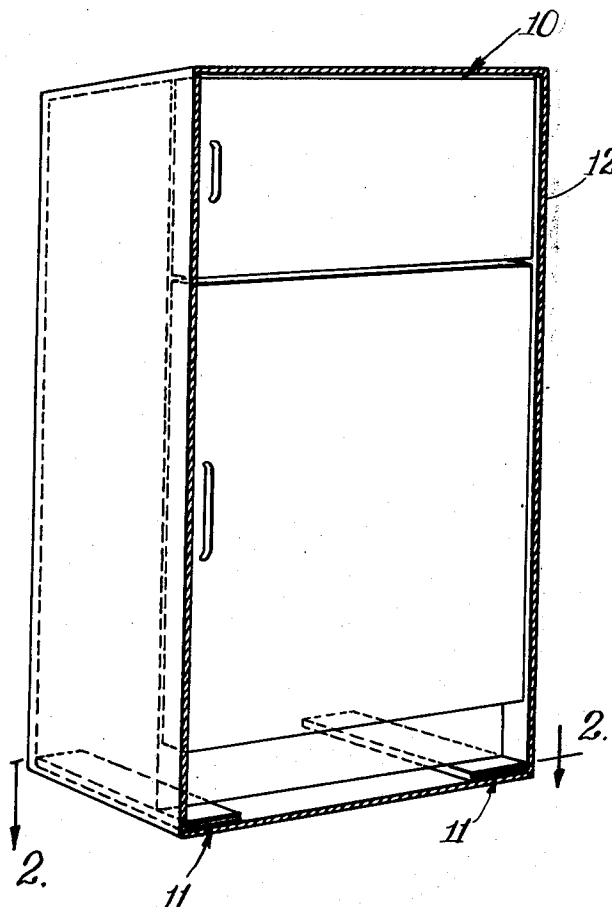


Fig. 1.

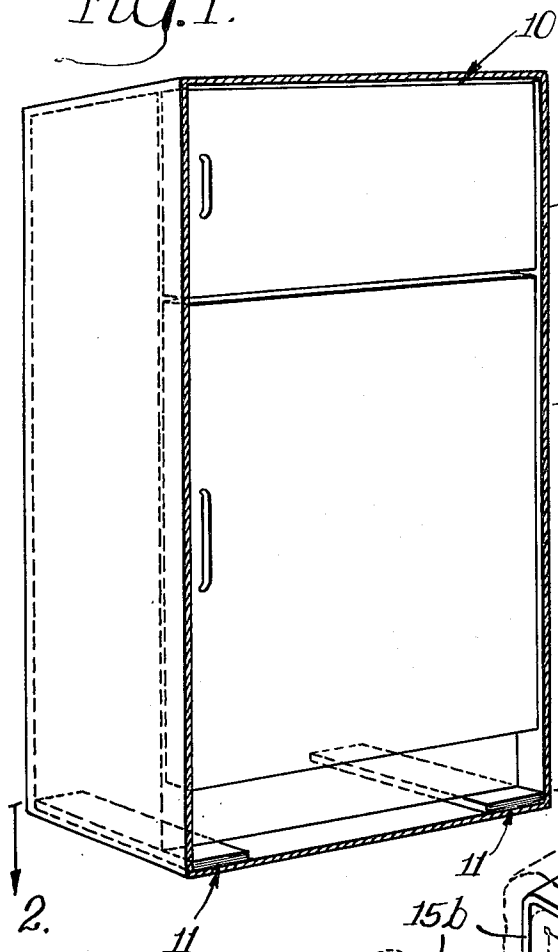


Fig. 2.

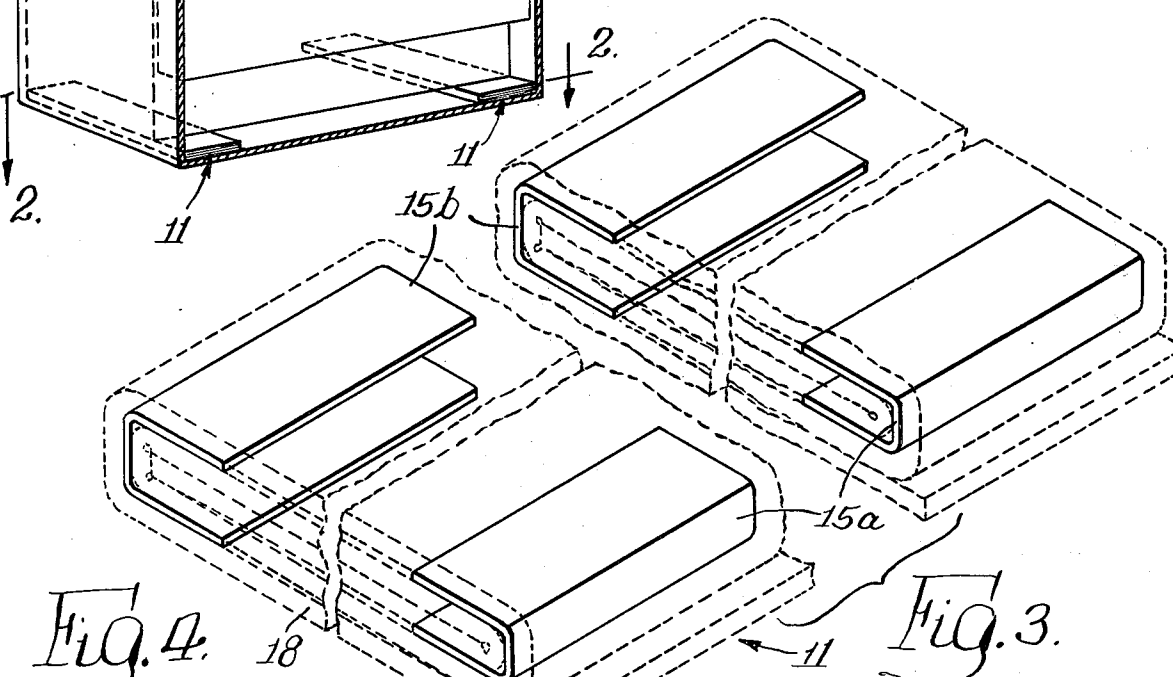
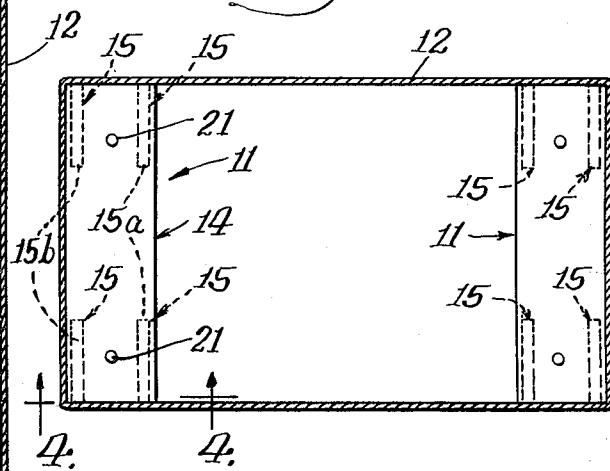
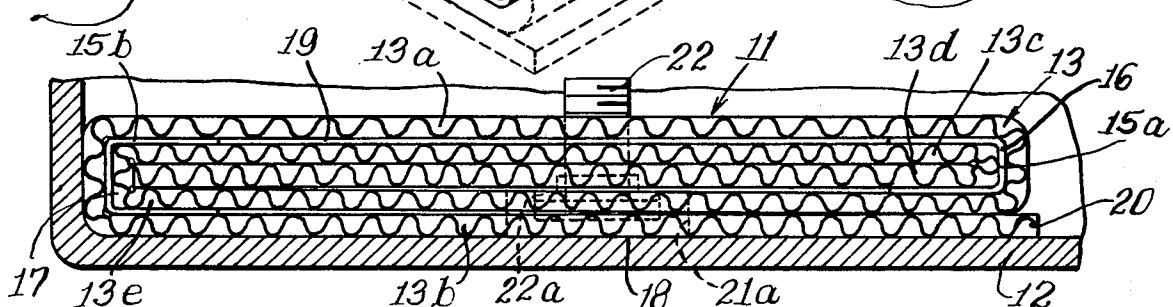


Fig. 4.



DISPOSABLE SKID

BACKGROUND OF THE INVENTION

1. Field of the Invention

This invention relates to material handling means, and in particular, to a disposable skid.

2. Description of the Prior Art

It is desirable to support merchandise commodities such as appliances on skids during manufacture and shipment. During installation of the appliance by the customer for use, the skid is removed and the appliance is mounted directly on the subjacent floor by means of its own legs or other support elements. A number of different pallets have been developed for use in the manufacturing and shipping operations. Examples of such pallets are shown in U.S. Letters Pat. Nos. 2,446,914 of C. D. Fallert et al, 2,544,657 of W. W. Cushman, and 2,559,930 of P. S. Bolton et al. The Fallert et al patent illustrates a pallet construction formed of corrugated board. In Bolton et al, the pallet comprises a hollow tube built up of layers of paper and having inserts in the ends of the tubes. In Cushman, the pallet comprises two sheet metal plates having their edges protected by a hollow tubular binder welded or otherwise connected between the plates.

SUMMARY OF THE INVENTION

The present invention comprehends an improved disposable skid support which may be fabricated to accommodate the specific item to be supported.

More specifically, the present invention comprehends such a skid which is formed of a sheet of corrugated disposable material folded into a parallelepiped runner having dimensions as desired by the fabricator to correspond to the requirements of the item being supported. In the illustrated embodiment, the skid is shown as adapted for carrying an appliance such as a refrigerator. A pair of skids are provided one each at opposite sides of the bottom of the refrigerator and may be provided with socket means for receiving attachment bolts to secure the skids to the refrigerator while supporting the refrigerator by the frame thereof. The corrugated sheet material defines runners which define a relatively nonabrasive lower surface permitting sliding of the appliance over the surface of the floor on which it is to be installed without damage to the floor. Thus, the runners may be formed of corrugated fiberboard folded into overlapping layers.

A plurality of reinforcement channels formed of a strong material such as metal are disposed within the runners embracing a folded edge of the sheet within the outermost layers so as to be effectively embedded in the runner thereby preventing engagement of the relatively rigid reinforcement channel with the floor surface and appliance. The reinforcing channels may be provided at the four corners of the runner.

The integrity of the folded runner may be maintained by an adhesive bonding confronting layers of the runner facially together, and in the illustrated embodiment, the adhesive extends over at least 80 percent of the total confronting surfaces of the runner layers.

The corrugated sheet material comprises a resilient means providing a cushion support of the appliance for improved handling thereof.

The skid may be formed of any suitable disposable, non-abrasive material and may be formed in any suit-

able size and layered configuration for accommodation thereof to the desired item to be supported. The skid is extremely simple and economical of construction while yet providing the highly desirable features and advantages discussed above.

BRIEF DESCRIPTION OF THE DRAWING

Other features and advantages of the invention will be apparent from the following description taken in connection with the accompanying drawing wherein:

FIG. 1 is a perspective view of a refrigeration appliance carried on support means embodying the invention;

FIG. 2 is a horizontal section thereof taken substantially along the line 2—2 of FIG. 1;

FIG. 3 is a fragmentary enlarged perspective view of one skid;

FIG. 4 is a fragmentary enlarged transverse section taken substantially along the line 4—4 of FIG. 2;

DESCRIPTION OF THE PREFERRED EMBODIMENT

In the exemplary embodiment of the invention as disclosed in the drawing, an item to be supported generally designated 10, herein comprises an appliance such as a refrigerator. The invention is directed to an improved form of support means, herein comprising skid supports generally designated 11 underlying the appliance. As shown in FIG. 1, the appliance may be enclosed in a suitable carton 12 during shipment with the skids 11 being provided within the carton. The skids may be utilized during assembly of the appliance as well as during shipment. As will be obvious to those skilled in the art, the skid supports may be used with any item or commodity within the scope of the invention.

Referring to FIGS. 2 and 4, each skid support comprises a sheet 13 of corrugated disposable material folded into overlapping layers to define a generally parallelepiped runner 14. The skid further includes a plurality of reinforcement channels generally designated 15 disposed within the runners for reinforcing the four corners thereof. As shown in FIGS. 2, 3 and 4, the reinforcing channels include a first pair of reinforcing channels 15a and a second pair of reinforcing channels 15b embracing folded edges of the sheet within the outermost layers 13a and 13b.

As shown in FIG. 4, reinforcement channels 15a embrace the folded edge 16 of layers 13c and 13d and reinforcement channels 15b embrace the folded edge 17 of layers 13c and 13e with layer 13d being disposed between layers 13c and 13e at edge 17. Thus, channel 15a embraces two layers of the folded sheet, whereas channel 15b embraces three layers thereof in extending around the edge 17. As shown in FIG. 3, the channels are disposed within the folded sheet so as to be effectively embedded therein preventing engagement thereof with the subjacent floor surface or superjacent appliance. Thus, the skid presents a non-abrasive, relatively soft lower sliding surface 18 for facilitated sliding of the appliance over the floor surface to the position of installation.

The confronting surfaces of the respective layers may be bonded together by suitable adhesive means 19 which illustratively may comprise a polybond adhesive. Illustratively, the adhesive may cover over 80 percent of the confronting surfaces to provide an improved

strong skid construction. Illustratively, the skid may have a thickness of at least approximately $\frac{3}{4}$ inch with the reinforcing channels extending less than one-third of the length of the runner. The thickness of the sheet material may be approximately $\frac{3}{16}$ inch so that the spacing between the legs of channels 15a may be approximately $\frac{3}{8}$ inch and the spacing between the legs of channel 15b may be approximately $\frac{1}{2}$ inch. The lowermost layer 13b of the runner may have an end portion 20 projecting slightly outwardly from the remainder of the runner as desired.

As illustrated in FIG. 2, each runner may be further provided with a plurality of socket elements 21 adapted to each receive a bolt 22 projecting upwardly to secure the skids to the appliance (FIG. 4). The bolts are received in openings in the base of the appliance (not shown) and fitted into a recess 21a against a metal cup washer 22a such that the bolt head will not contact the floor surface when the carton 12 is removed. Upon removal of the carton 12, and movement of the appliance to the final installation position, the appliance may be tilted to one side and then the other for removal of the bolts 22 and skids 11.

As discussed above, the corrugated sheet may be formed of fiberboard and illustratively herein, is formed of a high wet strength, single wall fiberboard. The channels are formed of a rigid material such as steel. The skid may be fabricated by the manufacturer or shipper of the item thereby eliminating the need for remote fabrication and shipment to the site of usage as with conventional skids. As the skids may be formed of low cost material, they provide for improved disposability as compared to the increasingly expensive wooden skids normally employed for major appliances. The corrugated skids provide cushioning of the product thereby providing an improved shipping material handling functioning. By eliminating abrasion on the floor surface as the appliance is slid thereover to the final installation position, further improved ease in handling the appliance is provided.

The skids are extremely simple and economical of construction while yet providing the highly desirable advantages over the skid supports of the prior art. As the skids may be tightly formed in the folding and wrapping operation, they provide a substantially voidless integrity for stability and trouble-free support functioning.

The foregoing disclosure of specific embodiments is illustrative of the broad inventive concepts comprehended by the invention.

We claim:

1. A disposable material handling support comprising: a sheet of corrugated disposable material folded and wrapped continuously into at least five substantially flat layers to define a generally parallelepiped runner; and a plurality of reinforcement channels formed of strong, rigid material embracing opposite folded edges of the sheet within the outermost layers for defining embedded reinforcement means at corners of the runner.

2. The disposable material handling support of claim 1 wherein said corrugated material comprises fiberboard.

3. The disposable material handling support of claim 1 wherein said channels are formed of metal.

4. The disposable material handling support of claim 1 wherein said channels have a length substantially less than that of the length of the runner and are disposed one each at the four corners of the runner.

5. The disposable material handling support of claim 1 further including a plurality of socket means in said runner opening outwardly through the runner for receiving runner attachment bolts.

6. The disposable material handling support of claim 1 further including adhesive bonding confronting layers of said runner facially together.

7. The disposable material handling support of claim 1 wherein one of said channels embraces three layers at a folded edge of said sheet within the outermost of said layers and another of said channels embraces two layers at the folded edge of the innermost of said layers.

8. The disposable material handling support of claim 1 wherein a pair of said channels embrace at least two layers at a folded edge therebetween.

9. A disposable skid comprising: a sheet of corrugated disposable fiberboard folded and wrapped continuously into at least four overlapping layers to define a generally parallelepiped runner; and a reinforcement channel embracing a folded edge of the sheet within the outermost layers for defining embedded reinforcement means therein.

10. The disposable skid of claim 1 wherein said runner has a thickness of at least $\frac{3}{4}$ inches.

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