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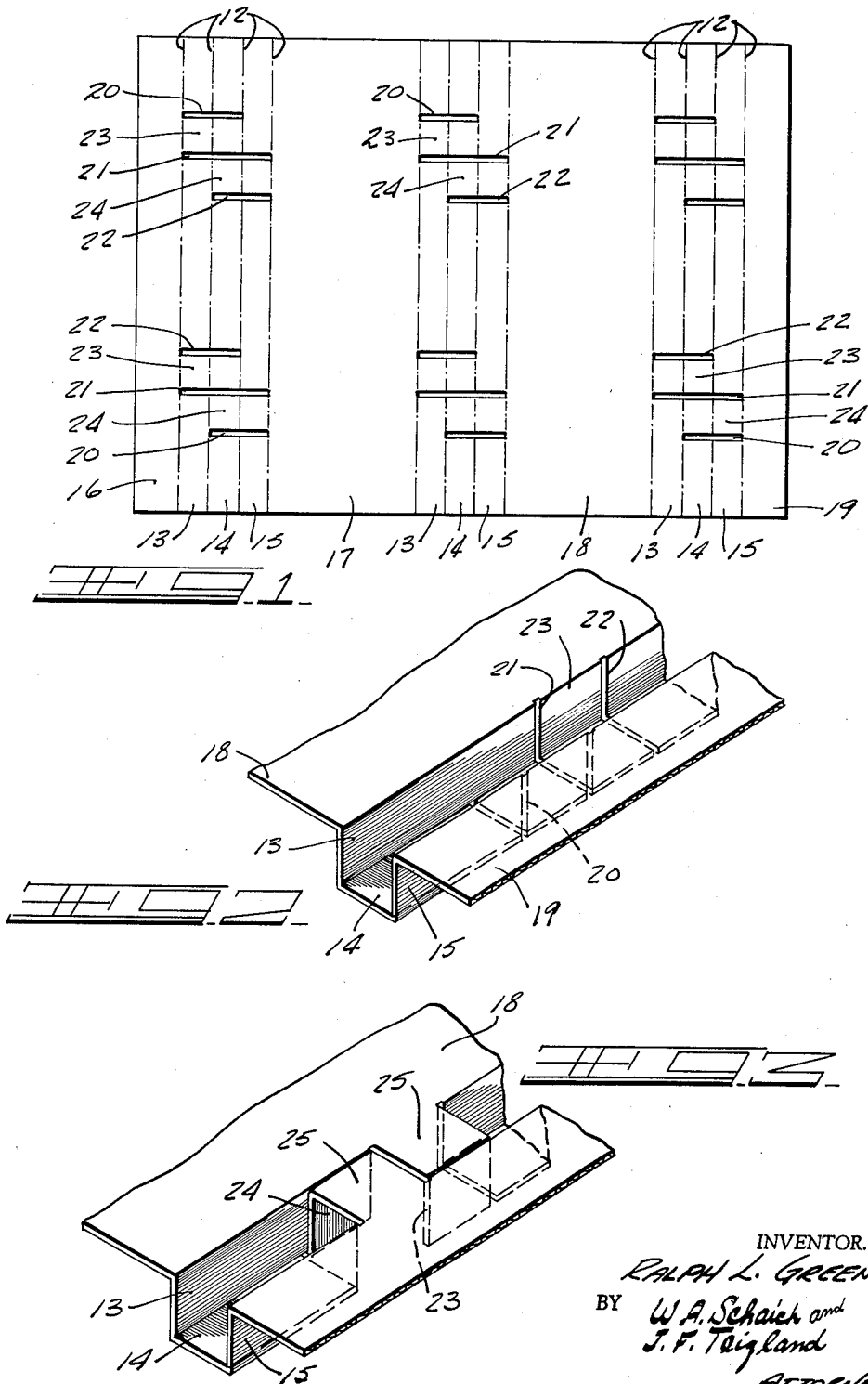
R. L. GREENE

3,012,747

PALLET

Filed June 14, 1960

2 Sheets-Sheet 1



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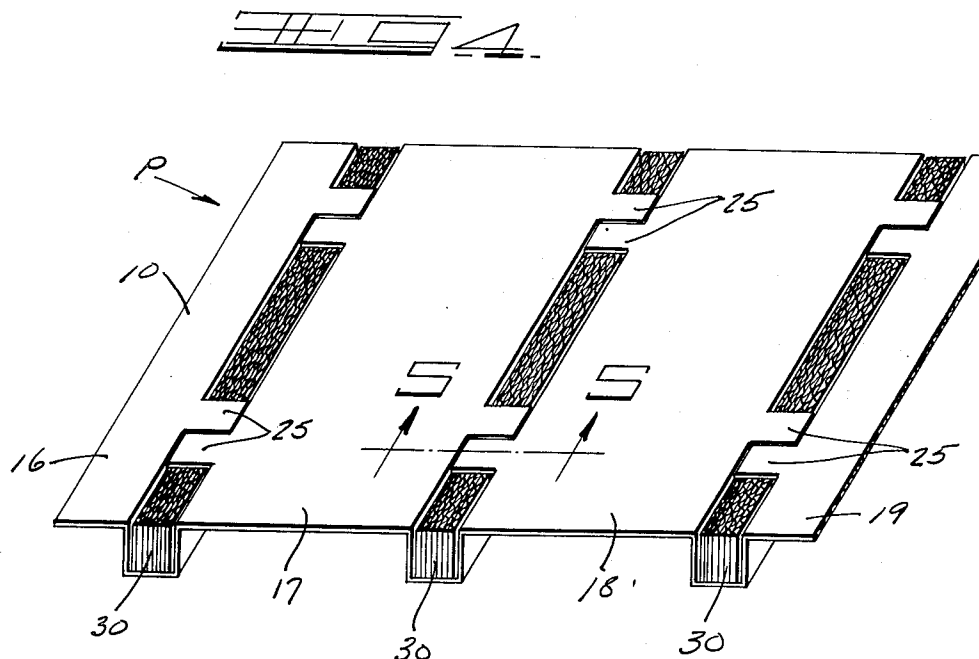
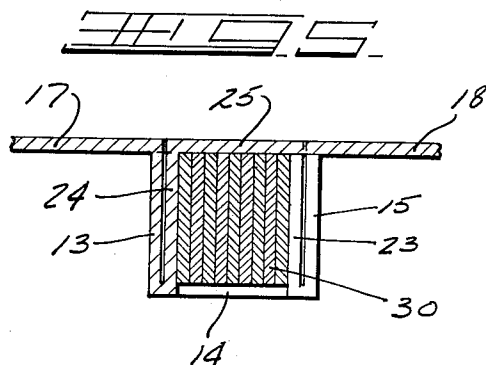
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PALLET

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6 Claims. (Cl. 248-120)

This invention relates generally to pallets, and more particularly to paperboard pallets, for use in connection with material handling equipment, such as industrial fork lift trucks and the like.

My invention, in its illustrated form, is primarily directed to a pallet which is formed of a sheet of paperboard material which is scored and folded to form a plurality of generally U-shaped depending channels which are spaced apart and interconnected by means of horizontal panels. Each of the channels has a plurality of transverse slots which are arranged to form pairs of oppositely disposed bands. These bands are folded to an inverted position whereby they form a rectangular opening with the remainder of their respective channel. Runners are inserted into the channels and extend through the openings, whereby a pair of oppositely disposed bands coact and cooperate with the runners to maintain the channels erect.

Pallets of the general type having an elevated platform supported by a plurality of parallel spaced apart runners are well known in the art. They are, however, ordinarily formed of wood and are quite costly and expensive. They are objectionable because of their high initial cost, and because their weight results in high freight charges for their return shipment for reuse, which is dictated by their high initial cost. Disposable corrugated paperboard pallets have been found objectionable because their construction has not allowed easy assembly, and because they have required fastening devices such as staples, glue, or tape, which often are not available for "on-the-job" assembly.

Accordingly, it is an object of my invention to provide an inexpensive pallet of simple construction, the economics of which permit it to be disposed of after one use.

Another object of this invention is to provide a pallet formed of corrugated paperboard which may be easily and quickly erected without the use of any additional fastening devices.

The specific nature of this invention, as well as other objects and advantages thereof, will become apparent to those skilled in the art from the following detailed description taken in conjunction with the annexed sheets of drawings, on which, by way of example only, the preferred embodiment of this invention is illustrated.

In the drawings:

FIG. 1 is a top plan view of a paperboard blank incorporating my invention;

FIG. 2 is a partial perspective view of an erected channel formed by folding the paperboard blank;

FIG. 3 is a partial perspective view of an erected channel with the bands folded to form a rectangular opening with the channel;

FIG. 4 is a perspective view of an assembled pallet incorporating my invention; and

FIG. 5 is a sectional view taken on the line 5-5 of FIG. 4.

The assembled pallet P, as illustrated in FIG. 4, may consist of a folded paperboard blank 10 and runners 30. The paperboard blank 10, which is preferably constructed of corrugated paperboard and is shown in flattened form in FIG. 1, has a plurality of parallel laterally spaced scores 12 which define the side margins of a plurality of panels. The scores 12 are spaced to provide three groups of channel-forming panels 13, 14, and 15 of equal width.

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Interspaced between these groups of channel-forming panels are horizontal panels 16, 17, 18, and 19.

Each group of channel-forming panels has extending across its width two groups of three transverse slots 20, 21, and 22 which are arranged to form pairs of opposed bands 23 and 24. Of a group of slots, the outermost slot 20 spans two adjacent channel-forming panels, the center slot 21 spans three adjacent channel-forming panels, and the innermost slot 22 spans two adjacent channel-forming panels, but not the same two panels spanned by the outermost slot. Thus, when the blank is folded to form a depending channel (see FIG. 2), each group of slots forms a pair of oppositely disposed bands 23 and 24 which are generally L-shaped in section. It is to be understood, of course, that other arrangements of slots may be used to form the bands. For example, a pair of oppositely disposed spaced apart bands may be formed by four slots. It is only important that each channel have at least one pair of oppositely disposed bands, although I have found it preferable that two pairs of bands be formed for each channel.

Referring to FIGS. 4 and 5, the fillers or runners 30, as illustrated in this embodiment, consist of longitudinal strips of corrugated paperboard which have been placed in face-to-face relationship to form a longitudinally extending parallelepiped which is substantially square in cross-section. The runners may be formed by slit scoring a sheet of corrugated paperboard which is then accordion folded. It is to be understood, of course, that the material of which the fillers or runners are constructed is determined by the nature of the goods being palletized. For instance, blocks of wood may be used where greater strength is required.

In erecting and assembling a pallet, a blank 10 is folded to form three depending channels. The bands 23 and 24 are then folded to an inverted position so that they have a portion 25 vertically spaced above and in parallel relationship with the bottom of the channel, thereby forming, in association with the channel, a generally square opening. See FIGS. 3 and 5. Next, the fillers 30, which are sized to fit slidably within the channel and square openings formed by the channel and the bands, are inserted into the channels. The pallet P, as thus assembled, is complete and ready for use. When a load is placed on the pallet, the side walls of the channel tend to move slightly about in a lateral direction. The pairs of oppositely disposed bands coact to restrain this lateral movement and prevent collapse of the channels. The lateral movement of the side walls of the channel also draws the bands down against the runners to hold them securely in place.

In an erected pallet, the horizontal panels are spaced above the surface on which the pallet is placed. The resulting spaces between the horizontal panels and the surface and the channels permit fork lifts to pass under the pallet. A pallet of the type described is ideally suited for use with flat, sheet-like articles, such as paperboard box blanks, where each article may extend across two or more runners. It is to be understood, of course, that a pallet incorporating my invention can be formed with any number of channels.

It will also be understood that various details of construction may be modified through a wide range without departing from the principles of this invention, and it is not, therefore, the purpose to limit the patent granted otherwise than necessitated by the scope of the appended claims.

I claim:

1. A pallet for use with fork lift trucks comprising a sheet of paperboard having a multiplicity of spaced parallel scores defining the side margins of a plurality of panels, said sheet being folded to position certain panels in a

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common horizontal plane, the remainder of said panels being folded to form a plurality of generally U-shaped depending parallel channels interspaced between said certain panels, a plurality of load bearing fillers respectively inserted in said channels, and means integral with said sheet for maintaining said channels upright and locking said fillers in place, said means including at least one pair of oppositely disposed bands for each of said channels, said bands being formed by a plurality of transverse slots extending across said channel-forming panels, each of said slots extending completely across at least two of said channel-forming panels.

2. A pallet as defined in claim 1, wherein said fillers comprise a plurality of strips of paperboard placed in face-to-face relationship.

3. A pallet comprising a sheet of paperboard scored and folded to form a plurality of spaced apart U-shaped channels foldably connected along their upper edges to horizontal panels, load bearing fillers inserted in each of said channels, and a plurality of pairs of oppositely disposed bands cut from the panels forming said channels and folded to in part overlie said fillers, said bands arranged to restrain the side walls of the channels against outward lateral movement.

4. A pallet comprising a sheet of paperboard having a multiplicity of laterally spaced parallel scores, said sheet folded along said scores to form a plurality of generally U-shaped depending parallel channels interconnected by horizontal panels, each of said channels having side and bottom panels of equal width and two groups of transverse slots extending across said side and bottom panels, each of said groups of slots arranged to form pairs of oppositely

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disposed bands, each of said bands folded to an inverted position to form a generally square opening with its respective channel, and a load bearing filler inserted in each of said channels, said fillers extending through said openings and coacting with said bands to restrain said side panels against outward lateral movement.

5. A pallet as defined in claim 4, wherein said fillers comprise a plurality of strips of paperboard placed in face-to-face relationship and adapted to fit slidably within said channels and openings.

6. A pallet comprising a sheet of paperboard scored and folded to form at least one depending channel, said channel having a bottom panel and oppositely disposed side panels, a plurality of slots extending across said panels and arranged to form at least one pair of oppositely disposed bands, said bands being folded to have a portion parallel to and vertically spaced above said bottom panel to enclose a portion of said channel, and a load bearing filler element inserted in said channel and extending through said enclosed portion, thereby cooperating with said bands to restrain said side panels against outward lateral movement.

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