June 23, 1953 L. E. VOGEL 2,643,080

DISPOSABLE PALLET

Filed April 19, 1949

Fig. 4

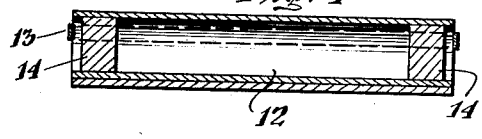


Fig. 1

Fig. 2

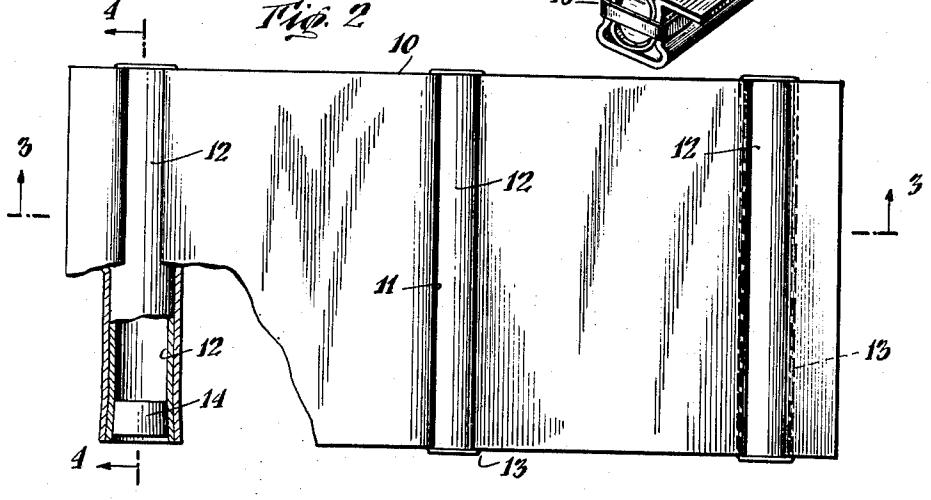
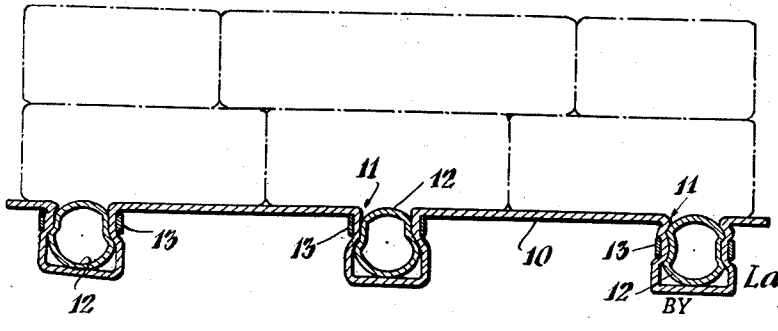


Fig. 3



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2,643,080

UNITED STATES PATENT OFFICE

2,643,080

DISPOSABLE PALLET

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3 Claims. (Cl. 248—120)

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This invention relates to pallets such as are used with fork-lift material handling trucks.

Pallets are commonly used as platforms on which packaged material is stacked to a convenient height. The loaded platforms can then be transported by fork-lift trucks inasmuch as the fork is inserted between the weight-supporting elements or legs of the pallet and by application of power to the fork, the pallet with its load is lifted from the floor, ready for movement within a plant or for easy loading into a freight car.

The great convenience of pallet usage is that there is no need to handle and rehandle the individual units loaded on the pallet so that a single loading of a pallet at a manufactory suffices until the loaded pallet reaches its ultimate consumer destination.

It is highly desirable to construct a pallet that is strong and easily constructed and which costs so little as to warrant its use but once without the necessity of its being returned.

My invention comprises a pallet made of a series of weight-carrying, elongated, cylindrical members inserted in spaced grooves located in an elongated paper web. In a preferred form of my invention I retain the weight-carrying members within their grooves by reinforcing means which encompass the paper web surrounding the grooves with their cylindrical element therein and which may be metal straps, preferably of steel, rope, textile tape and the like. As the cylindrical weight-carrying elements, I prefer to use tubular cylinders of paper, reinforced with end plugs, preferably made of wood, which are insertable into the tube ends.

I find that by tightening the metal straps which encompass the grooves with their cylindrical weight-carrying tubes, the lateral expansion causing collapsing of the tubes is prevented in the case of tubes having wooden plugs as well as where the wooden plugs are absent. This tightening of the metal straps may result in squeezing the circular tube somewhat out of a circular shape but the important thing is that collapsing by sideways expansion is prevented.

While I may use strong card-board for my paper web, I prefer to use a corrugated paper web, such as is commonly used to make corrugated cartons for shipping merchandise, and prefer to have the corrugations run transversely to the pallet length.

My pallets may be of any convenient length or width and the grooves may be closely or widely spaced from each other, depending upon the load to be carried by the pallet. For heavy loads I

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space my grooves in the paper web closely, whereas for lighter loads the grooves are spaced more widely from each other.

Referring now to the accompanying drawing which shows an illustrative example of my specification:

Fig. 1 is an isometric view of my invention; Fig. 2 is a top elevation broken away in part to show the detailed construction of a weight-carrying element; Fig. 3 is a cross-sectional view taken on line 3—3 of Fig. 2, and Fig. 4 is a detailed cross-sectional view taken on line 4—4 of Fig. 2.

Turning now to Fig. 1, a paper web 10 has spaced grooves 11 therein. Within these grooves are located cylindrical weight-carrying elements 12 retained in the grooves by metal straps 13. In the preferred form of my invention shown, the cylindrical weight-carrying elements are tubular and have located within the tube wooden plugs 14, preferably in the tube ends but additional plugs located within the body of the tubes are within the scope of my invention.

In making my pallets, the web may be made in continuous length and thereafter cut to the desired size as it emerges from the forming machine, or alternatively a web of a desired length may have a number of grooves made therein to accommodate a like number of cylinders. The height of the grooves and their enclosed elements 12 along with the spaced relation of the grooves to one another, must be sufficient to allow the passage of the truck fork between the web of the pallet and the floor.

Modifications of my invention other than those already made, will be apparent to those skilled in the art.

What I claim is:

1. A pallet comprising a longitudinal web of corrugated paper having transverse grooves in spaced relation therein and the corrugations of which run transversely to the web length, weight-carrying tubular cylinders of paper having wooden plugs in their ends and steel straps encompassing the paper web surrounding the groove with its tubular element therein, whereby the weight-carrying tubular cylinders are permanently secured in the grooves and the tendency of said cylinders to expand laterally and collapse is reduced.

2. A pallet comprising a corrugated paper web with a series of transverse grooves therein, weight-carrying tubular paper cylinders with several wooden plugs located within the tube and positioned in said grooves, and metal straps for retaining the cylinders in the grooves.

3. A pallet comprising a web of paper with transverse grooves therein, cylindrical weight-carrying elements located in said grooves and straps which are positioned lengthwise around the paper web surrounding the groove to completely encircle the groove and the length of the cylindrical element therein, to hold said elements within the grooves and reduce the tendency of the elements to expand laterally and collapse.

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