United States Patent

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[54] **PALLET**
7 Claims, 4 Drawing Figs.

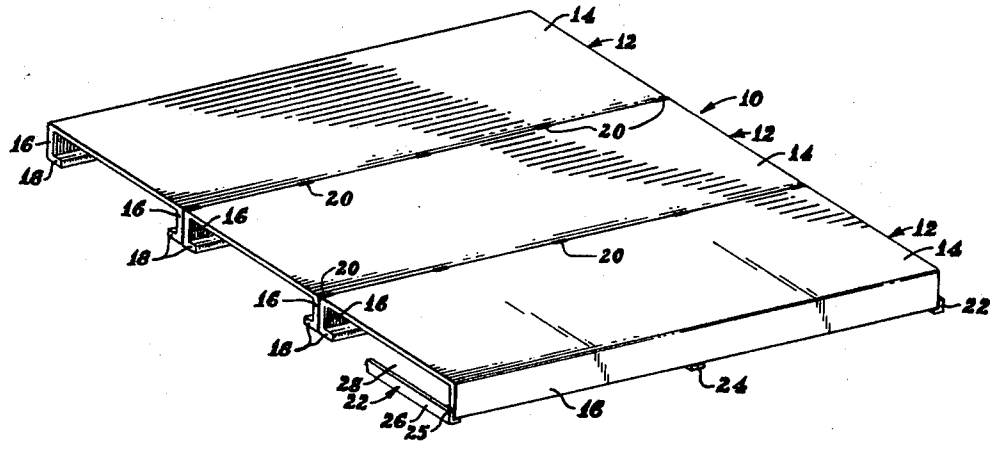
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[51] **Int. Cl.** **B65d 19/18**
[50] **Field of Search** 108/51-
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ABSTRACT: A lightweight pallet formed by an assembly of channel-shaped panel members, tack-welded along their adjacent side-edges and reinforced by transverse strips adjacent the lower edge of the panel members.



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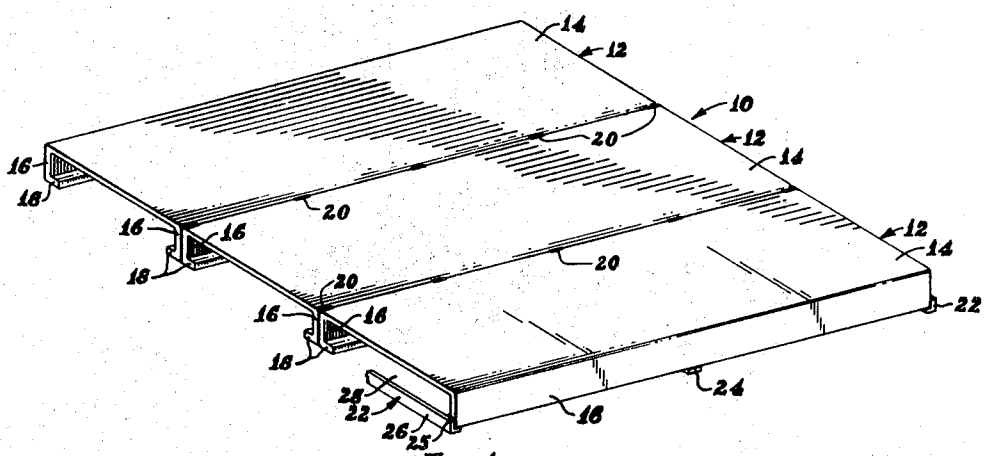


Fig. 1

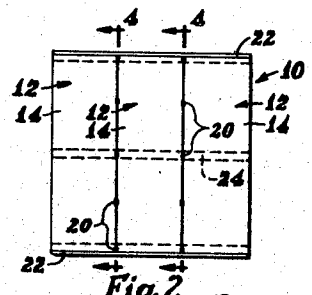


Fig. 2

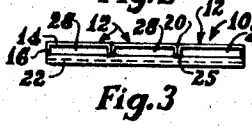


Fig. 3

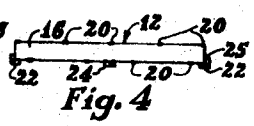


Fig. 4

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PALLET

This invention relates to work-supporting pallets utilized in association with a lift truck for the moving and storage of products of various types.

Concepts of the present invention provide a pallet of lightweight construction which utilizes the strength of channel section members even though formed of relatively thin material or sheet members, desirably of aluminum or light alloys; and the inventive concepts also provide a desired economy of construction and assembly.

According to the inventive concepts of the pallet of the present invention, a plurality of channel members are tack-welded along their adjacent side-edges, maintaining the members in an assembly in which the intermediate channel-panels cooperate to form the overall pallet deck, and the side panels provide the vertical support legs therefor, supporting the decking in a position high enough to receive the lifting forks or prongs of the associated material-handling vehicle. Transverse strips reinforce the assembly.

The above description is quite general and introductory; more specific details, components, and concepts of the overall invention appear in the following detailed description of an illustrative embodiment thereof, taken in conjunction with the accompanying generally diagrammatic drawings, in which:

FIG. 1 is a pictorial view of a pallet according to the illustrative embodiment, portions of one of the reinforcing strips being shown broken away for clarity of presentation of other components;

FIG. 2 is a top or plan view thereof, in considerably smaller scale;

FIG. 3 is a front view thereof; and

FIG. 4 is a vertical cross-sectional view thereof, being taken generally as indicated by either of the section lines 4 of FIG. 2.

As shown in the drawings, a pallet **10** according to the inventive concepts is shown economically formed from three longitudinal members **12**, which may be and desirably are identical, and which are disposed in side-by-side relationship, as shown.

Each of the pallet-forming members **12** is shown formed of a generally channel-type cross section, generally of inverted-U-shape, providing, as viewed from the end thereof, a central horizontal panel **14** and at each lateral side thereof a vertically-disposed supporting panel **16**, the lower end of each vertical panel **16** being turned horizontally inwardly a short distance to provide a stiffening flange **18**.

It will be observed that the central panels **14** of the three members **12** cooperate to provide the horizontal work-supporting surface or decking of the pallet.

The assembled relation of the three panel-members **12** is maintained partly in the embodiment shown by tack welds **20** provided along adjacent side edges of contiguous panel-members **12**, as shown along both the top and bottom junctions of side panels **16** with top panels **14**. The assembled relation is shown also provided partly by supporting members now to be mentioned.

The vertical panels **16** cooperate to provide four vertically disposed support members, in the overall assembly.

Supporting members are shown extending transversely of the assembled pallet-members **12**; and as shown, the support members include a front and a rear strip **22**, of angle or L-shaped cross-sectional shape, and a central strip **24**, of flat cross section. These support members **22** and **24** are secured to the lower portions of the panel members **12**, as by tack welding **25**; and they both help to maintain the assembled relation of the panel members **12** and maintain the general flatness of the assembly in use.

The upstanding wall **26** of each of the strips **22** is of a relatively short height in comparison to the height of the vertical pallet-panels **16**; and the opening **28**, between the upper edge of vertical strip-wall **26** and the lower face of horizontal pallet-panel or decking **14**, provides the accommodation or receiving opening for the prongs or forks of an associated lift truck (not shown).

The front and rear support strips **22** may be and desirably are identical, and the front and rear faces of the overall pallet **10** are thus of identical shape.

It is thus seen that a device according to the inventive concepts provides a desired and advantageous pallet, which achieves the dual advantages of both lightness of weight and economy of production.

Accordingly, it will thus be seen from the foregoing description of the invention according to this illustrative embodiment, considered with the accompanying drawings, that the present invention provides a new and useful lightweight pallet, having desired advantages and characteristics, and accomplishing its intended objects, including those hereinbefore pointed out and others which are inherent in the invention.

Modifications and variations may be effected without departing from the scope of the novel concepts of the invention; accordingly, the invention is not limited to the specific form or arrangement of parts herein described or shown.

I claim:

1. A pallet formed of horizontal work-supporting panel means, having extending downwardly from spaced locations thereof vertically disposed support members which support the said panel means above the associated supporting base upon which the pallet is supported, thereby accommodating the generally horizontal lift members of an associated means for lifting and/or transporting the pallet, in a combination in which:

there are provided a plurality of panel members, each of a generally inverted-U channel shape when viewed in transverse cross section;

there being holding means provided which hold the panel members in side-by-side relation in which the intermediate panel of each of which members cooperates to provide one section of the said overall work-supporting surface; and the other panels of each of the panel members are disposed vertically and cooperate to provide the said vertical support members, the said pallet and its vertical support members accommodating the insertion of said associated means from laterally outwardly of the pallet inwardly of the periphery of the pallet and within the space between the associated supporting base and the said horizontal work-supporting panel means, said space being provided by the vertical height of said vertical support members provided by the channel shape panel members.

2. The invention as set forth in claim 1 in combination in which:

the lower edge-portions of each of the said vertically-disposed panels are formed to provide an inwardly-extending stiffening flange.

3. The invention as set forth in claim 1 in a combination in which:

there is provided welding along contiguous edges of the panel members for holding the said panel members in the said assembled relationship in which they cooperate to provide the pallet.

4. The invention as set forth in claim 1 in a combination in which:

there are provided support strips extending laterally with respect to the axis of the said panel members, and lying adjacent the base thereof.

5. The invention as set forth in claim 4 in a combination in which:

there are support strips at each end of the said panel members, these support strips being of a general L-shape when viewed in cross section, one flange of which underlies the lower edge of said vertically-disposed panels and the other flange of which is disposed vertically, the said other flange being substantially less in height than is the height of the said vertically-disposed panel member panels, and the said associated lift members are accommodated between the upper edge of said other flange and the lower surface of said intermediate panels.

6. The invention as set forth in claim 4 in a combination in which:

there are at least three such support strips provided, one adjacent each end of the said panel members and one intermediate thereof.

7. The invention as set forth in claim 4 in a combination in which:

the said holding means comprises the said laterally-extending support strips, there being means interconnecting said strips to said panel members, and the holding means also comprises means spaced at an elevation above said strips and interconnecting contiguous ones of said panel members.