

March 30, 1954

D. A. EBERHARDT

2,673,700

PALLET

Filed Oct. 22, 1951

2 Sheets-Sheet 1

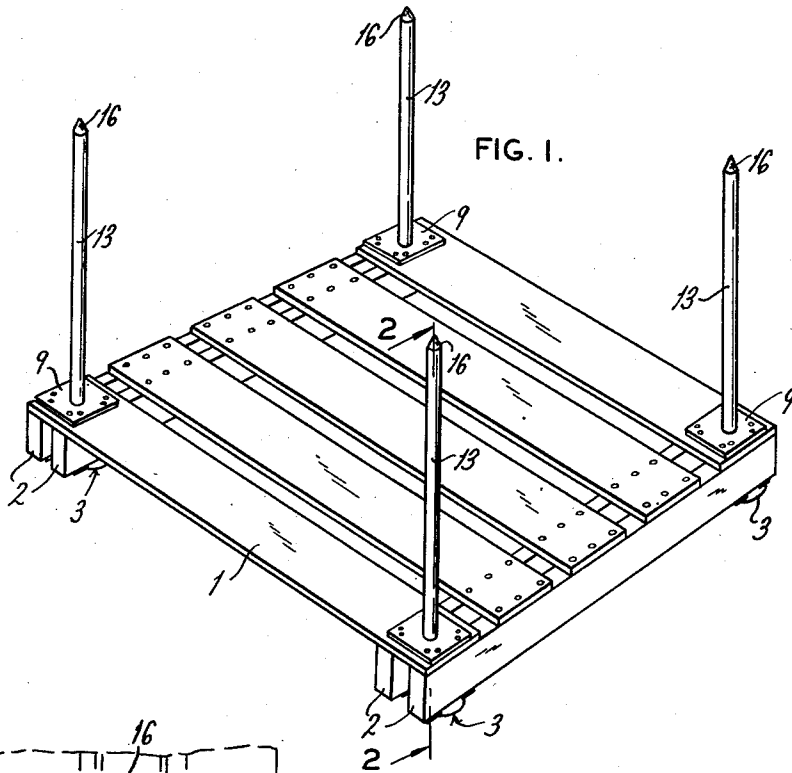


FIG. 1.

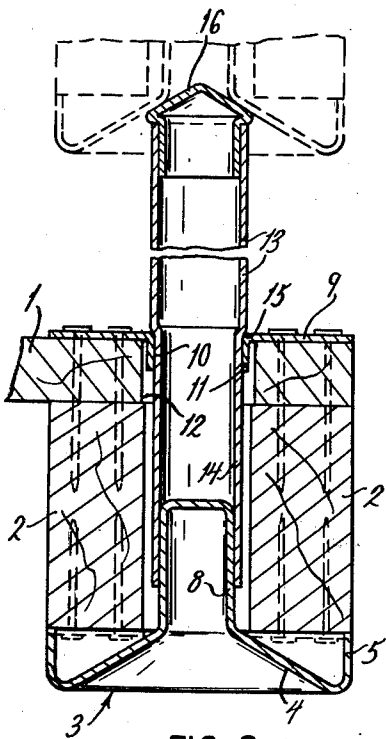


FIG. 2.

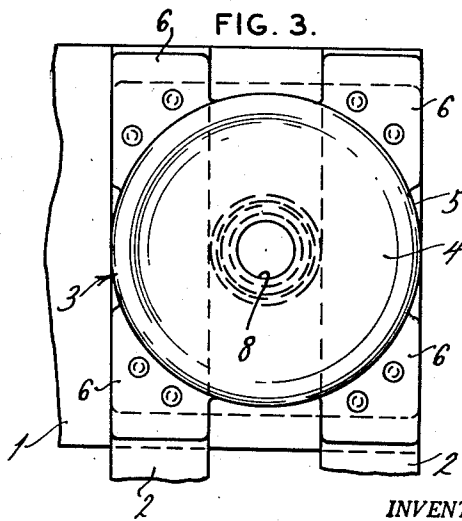


FIG. 3.

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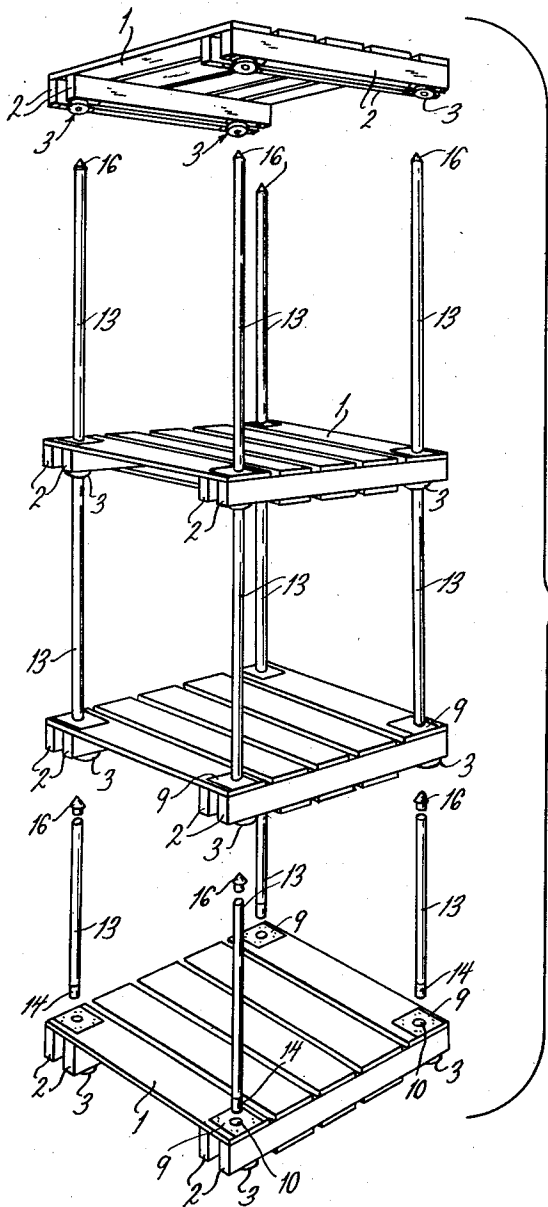


FIG. 4.

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2,673,700

PALLET

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Application October 22, 1951, Serial No. 252,443

3 Claims. (Cl. 248—120)

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This invention pertains to pallets such as are used in transporting goods about a factory, or like location, or for stacking them in such a manner as to be easily accessible.

An object of this invention is to provide a pallet construction such that a number of similar pallets may be stacked one upon the other, and the whole stack may be lifted by a fork truck.

In accordance with this invention, generally stated, the pallet comprises a platform structure, including a horizontal decking supported by stringers. The stringers are arranged in pairs along the opposite edges of the platform. At each corner of the platform is a structure designed to support another like pallet in a spaced position above the first. This structure includes a number of struts upstanding from the decking surface and arranged to receive the second pallet to rest upon their upper ends. Each of these struts rests in a socket formed by a top plate of sheet metal having an opening therein to receive the strut. Said plate is fixed to the decking at one corner of the pallet with the opening therein registering with the space between the two stringers of one pair at that end of the pallet. The decking, of course, is also perforated by an opening registering with that in said top plate. A bottom plate fixed to the bottom of the stringers has an upstanding extension fitting into the lower hollow end of the strut to align the latter and keep it upright. The strut is formed with a shoulder which rests upon the rim of the opening in the top plate so as to support the weight upon the strut, such weight being thereby supported on the decking so that the pallet may be picked up by a fork truck inserted under the decking. The bottom plate is formed with a centering socket on the underface thereof and the tops of the struts are provided with conical tips engaging such centering socket to support the pallet above.

A preferred embodiment of this invention is shown in the accompanying drawings, in which—

Fig. 1 is a perspective view of a pallet embodying this invention;

Fig. 2 is an enlarged section on line 2—2 of Fig. 1;

Fig. 3 is a bottom plan view of the bottom plate; and

Fig. 4 is a perspective "exploded" view showing a number of pallets arranged one above the other in stacked relation.

Referring to the drawings, the platform comprises a decking 1 supported by stringers 2.

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These may be of any suitable type of lumber secured together by nailing or other suitable means. The stringers 2 are arranged in pairs, one pair along each end of the platform, as shown in Fig. 1. The stringers of each pair are spaced from each other as will be more fully described later.

Arranged at each corner of the platform is a bottom plate indicated generally at 3. This may be formed by stamping out of sheet metal, and is formed to provide a conical recess or socket 4 surrounded by an upstanding flange 5 upon which the stringers 2 rest. The lower rim of this plate, at the junction of the flange 5, and the conical web 4 provide a foot for the pallet to rest upon when standing on the floor. Surrounding or extending laterally from the flange 5, an attaching flange 6 is formed by which the plate is attached to the stringers 2 by nailing or otherwise. In the central part of the plate an extension 8 is formed on or attached to the web 4. This extension is of a substantial height, as will be more fully explained later.

Fixed to the upper decking of the platform is a top plate 9 having an opening 10 therethrough. Said opening may or may not be formed with a collar or flange 11. The decking has a hole 12 bored therethrough in line with the opening 10, which latter opening is in vertical alignment with the extension 8 on the bottom plate. The top plate 9 may be secured to the decking by nailing, or otherwise, as indicated in Fig. 2.

An upright strut 13 has its lower end 14 formed to a smaller size than the body of the strut. This reduced end is sized so as to provide a close fit in the opening 10 of the top plate. At the terminus of said reduced end of the strut, a shoulder 15 is formed, which shoulder rests upon the rim of the opening 10 to support the strut 13 and whatever weight may be placed thereon. The extension 8 on the bottom plate is made long enough to extend into the hollow lower end of the strut 13, which may be tubular in structure, as shown in Fig. 2. The extension 8 has a sliding fit in the reduced end of the strut 13 so as to permit relative up and down movement of said strut. This extension, therefore, provides an aligning element adapted to maintain the strut in its upright position. At the same time, none of the weight on the strut is applied to the lower plate 3 on account of said sliding fit.

The upper end of the strut 13 may be provided with a conical tip 16 fitting the conical socket formed by the web 4 of a pallet stacked upon the strut 13.

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It will be seen that this invention provides a simple structure for a stacking pallet of this type. The top and bottom plate and the strut may be made as a set, four of such sets being applied to the platform structure to form the completed pallet. Any number of such pallets may be stacked one upon the other as seen in Fig. 4. In each case the weight carried by any strut is supported by the top plate 9, which in turn is supported by the decking 1. Accordingly, when the platform is picked up by a fork truck inserted under the decking 1, the weight is transmitted from the strut to the top plate 9 and thereby to the decking which in turn rests upon the strut. This provides a very rugged structure which at the same time, being made of sheet metal, may be manufactured by stamping at low cost.

Various changes may be made in the details of construction, within the scope of the appended claims, without departing from the spirit of this invention. Parts of the invention may be used without the whole and improvements may be added while retaining some or all of the advantages of the invention.

I claim:

1. In a pallet for storing merchandise having a deck and a supporting structure therefor, a top bearing plate attachable to said deck having an opening therethrough, a tubular strut having a portion of its lower end formed to a smaller size than the remaining portion thereof thereby forming a reduced end insertable into said opening and a shoulder adapted to rest on the rim of said opening when so inserted so that said tubular strut will be supported by said plate, and a foot plate attachable to the bottom of said supporting structure formed with an upstanding rim flange, a web extending inward from said flange and an upstanding extension of substantial length on said web, said extension having a slip fit in said reduced end of said strut adapted to maintain the latter in upright position while permitting relative vertical movement thereof.

2. In a pallet for storing merchandise having a deck and a supporting structure therefor, a top bearing plate of sheet metal attachable to said deck and having an opening therethrough, a tubular strut having a portion of its lower end formed to a smaller size than the remaining portion thereof, thereby forming a reduced end insertable into said opening and a shoulder

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adapted to rest on the rim of said opening when so inserted so that said tubular strut will be supported by said plate, and a sheet metal foot plate attachable to the bottom of said supporting structure formed with an upstanding rim flange, a conical web extending inward and upward from the bottom of said flange, and an upstanding extension of substantial length on said web, said extension having a slip fit in said reduced end of said strut adapted to maintain the latter in upright position while permitting relative vertical movement thereof.

3. A pallet for storing merchandise comprising, a platform structure including horizontal decking and a pair of spaced stringers supporting said decking at each end thereof, a top bearing plate of sheet metal having an opening therethrough, said plate being attached to said decking with said opening located opposite the space between said stringers of a pair and said decking having an opening in register with that of said plate, a tubular strut having a portion of its lower end formed to a smaller size than the remaining portion thereof thereby forming a reduced end insertable into said openings to extend downward between a pair of said stringers and a shoulder adapted to rest on the rim of said plate opening so that said tubular strut will be supported by said plate, and a sheet metal foot plate attached to the bottom of said stringers and formed with an upstanding rim flange providing a foot for the pallet, a web extending inward from said rim flange and an extension of substantial length upstanding on said web between said stringers and having a slip fit in said reduced end of said strut adapted to maintain the latter in upright position while permitting relative vertical movement thereof.

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