May 27, 1958 N. T. HAGLIND 2,836,384

PALLET WITH METAL CLAD STRINGERS

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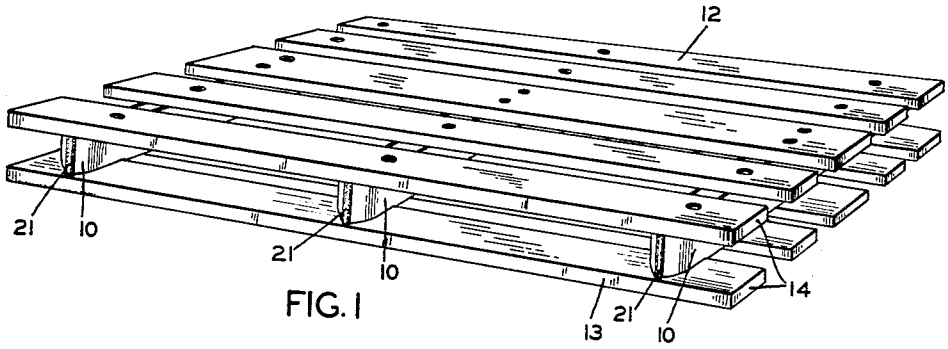


FIG. 1

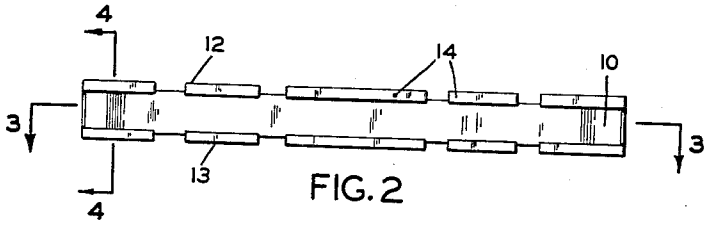


FIG. 2

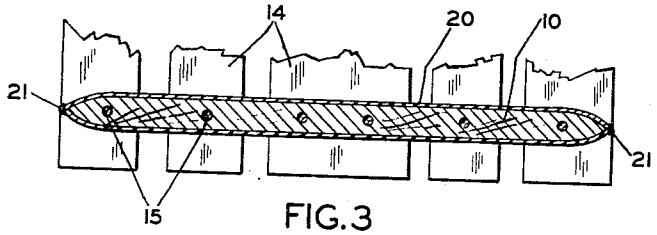


FIG. 3

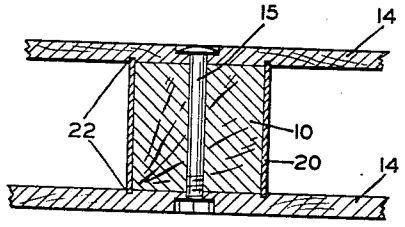


FIG. 4

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PALLET WITH METAL CLAD STRINGERS

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1 Claim. (Cl. 248—120)

The present invention relates to a skid or pallet such as is used in warehousing freight and transferring freight from one location to another by means of a lift truck.

A certain type of pallet used extensively heretofore, and particularly in stevedoring operations comprises two face forming, vertically spaced layers of planks secured by a plurality of stringers, generally three in number, extending transversely of the planks between the layers. In moving the pallet with a lift truck, the tines of the fork are inserted between the stringers and then elevated, whereby the tines engage the upper layer of planks upon which the load is placed. Wood has generally been used heretofore in constructing such pallets because of its relatively low cost and also because of its relatively light weight. The latter quality is important since the unloaded pallets frequently must be handled by hand. The stringers of such pallets have comprised square ended beams which are frequently split or otherwise damaged when the fork of a lift truck strikes the square end of the stringer. Frequently, also, the sides of the stringers are gouged or burned by the lift truck tines impairing the strength of the stringers.

When a stringer is damaged it is generally necessary to scrap the entire pallet regardless of the condition of the other parts thereof, since it is uneconomical in most instances to attempt to repair the stringer or to replace it. Various means have been proposed heretofore for protecting the stringers from damage but none have proved practical.

It is an object of the invention, therefore, to provide a new and improved construction of the stringers of a load bearing pallet, whereby the stringers are less subject to injury by the tines of a lift truck fork.

It is another object of the invention to provide a pallet having a protective metal sheathing upon the stringers of the pallet.

Still another object of the invention is to provide a pallet having metal sheathed stringers, which sheathing is secured in position in a new and novel manner.

Other objects and advantages of the invention will become more apparent hereinafter.

In accordance with the present invention there is provided a pallet having metal sheathed stringers formed with pointed or prow shaped ends whereby upon striking the slanted surface of the stringer end a lift truck fork is deflected into the openings between the stringers without injuring the stringer.

For a more detailed description of the invention reference is made to the accompanying drawings wherein:

Fig. 1 is a perspective view of a pallet constructed in accordance with the invention;

Fig. 2 is a side elevation of a pallet;

Fig. 3 is a sectional view taken substantially along line 3—3 of Fig. 2; and

Fig. 4 is a fragmentary section view taken substantially along line 4—4 of Fig. 2.

The illustrated pallet comprises three parallel spaced apart wooden stringers 10, and upper and lower faces

12, 13, respectively, formed of planks of wood or other suitable material extending transversely of the stringers. The planks 14 are secured to the stringers 10 by bolts 15, the bolt openings in the planks preferably being countersunk, as shown, to admit the bolthead and nut, whereby the same will not project above the surface of the planks.

Preferably the opposite ends of each of the stringers 10 are symmetrically tapered or rounded from the opposite sides of the stringer to form prow shaped ends thereon as best shown in Figs. 1 and 3. Tapering the ends of a stringer minimizes the possibility of injury to the stringer by a lift truck fork, since, as mentioned previously, a fork tine striking the tapering surface will be deflected into the openings between the stringers and will give only a glancing blow to the stringer which is not likely to cause injury to the stringer.

To further protect the stringers 10 from injury by the forks of a lift truck, an encompassing metal band or sheath 20 is provided about the sides and ends of each of the stringers. The sheaths 20 may be formed of two strips of metal of suitable thickness arranged snugly to engage the sides and tapering end surfaces of a stringer, and welded together at each of the opposite ends of the stringer as indicated at 21. Preferably the sheaths 20 are of greater width than the height of the stringers 10, whereby the sheaths extend both above and below the stringers, as may be seen in Fig. 4, and engage in grooves in the adjacent plank surfaces as indicated at 22. As is apparent the foregoing arrangement will hold the sheaths 20 securely in position upon the stringers 10, and the use of bolts, rivets or similar fastening devices is not required to secure the sheaths 20 in position, whereby the surfaces of the sheaths are smooth and continuous throughout and are free of protuberances upon which the tines of a lift truck might engage.

The aforementioned grooves in the planks 14 need not be preformed since they may be automatically formed in assembling the pallet. In constructing the pallets the planks 14 of the upper and lower faces 12, 13 are arranged on the stringers 10 upon which the sheaths 20 have previously been placed. The bolts 15 are then tightened to draw the planks 14 into engagement with the stringers 10 whereupon the protruding portions of the sheaths 20 are forced into the planks thus forming the grooves in the planks.

To compensate for the additional weight of the metal sheathing 20, the stringer 10 may be reduced somewhat in width as compared to the width of an unsheathed stringer. This may be done, moreover, without a sacrifice in strength because of the strengthening effect of the sheathing.

Having illustrated and described a preferred embodiment of the invention, it should be apparent to those skilled in the art that the invention permits of modification in arrangement and detail. I claim as my invention all such modifications as come within the true spirit and scope of the appended claim.

I claim:

A pallet comprising a plurality of spaced apart wooden stringers, upper and lower faces formed of wooden planks extending transversely of said stringers, a metal band-like sheath encompassing the sides and ends of each of said stringers, said sheaths being of greater width than the height of said stringers and extending above and below the top and bottom stringer surfaces, respectively, and a plurality of bolts extending vertically through said stringers and planks and securing the same together, said bolts being adapted to draw said planks into contact with said stringers during the assembly of said pallets, whereby the portions of said sheaths extending above and be-

low said stringers are forced into said planks, thereby to bind the sheaths in position.

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