

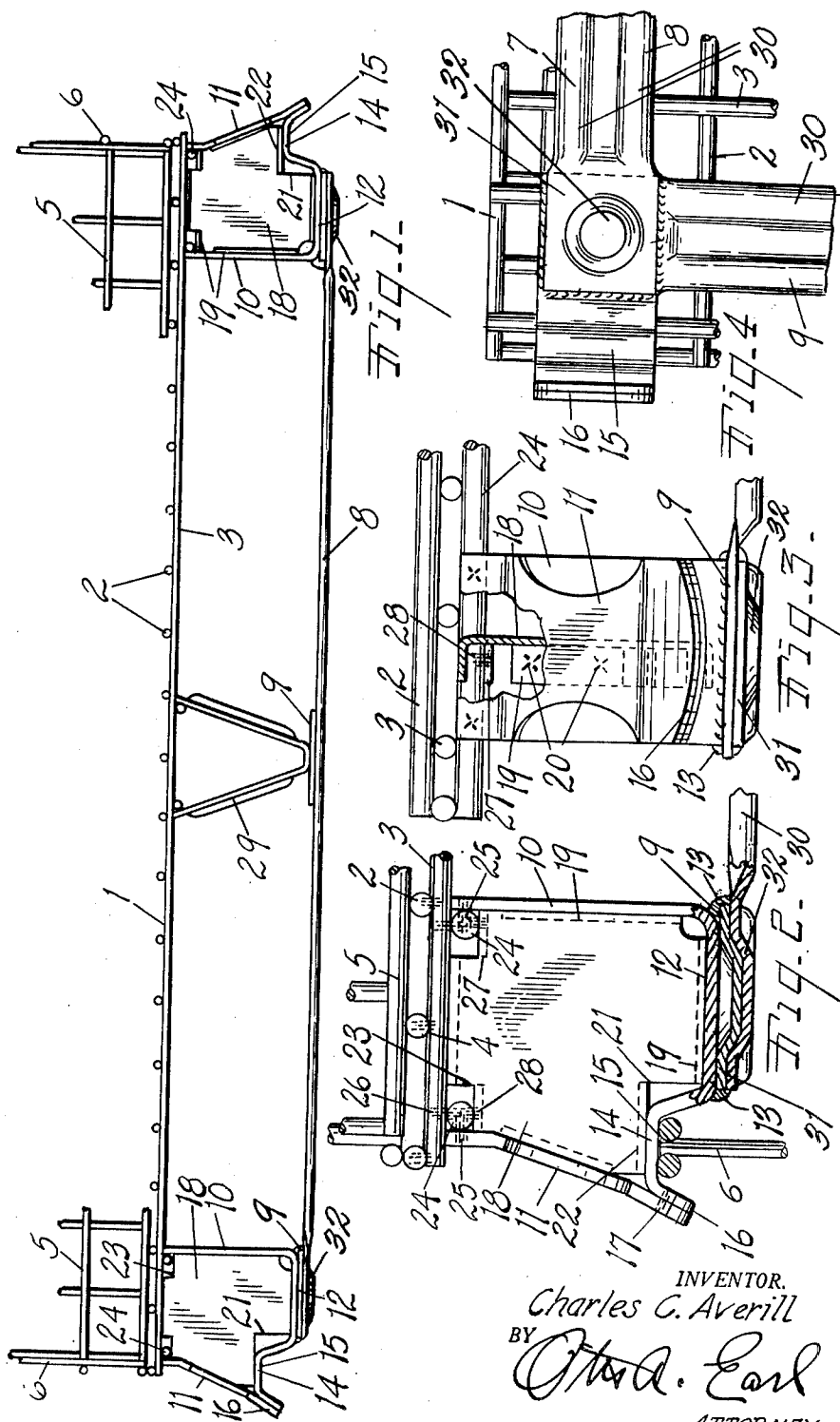
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MATERIALS HANDLING PALLET

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## MATERIALS HANDLING PALLET

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6 Claims. (Cl. 248—120)

This invention relates to improvements in a materials handling pallet.

The main objects of this invention are:

First, to provide a materials handling pallet which is adapted for stacking on similar pallets provided with walls.

Second, to provide a materials handling pallet and a leg structure which may be formed of sheet metal and which is very strong and rigid and well adapted to withstand shocks and blows to which it is likely to be subjected in use.

Third, to provide a leg structure having these advantages which may be very securely attached to the deck.

Objects relating to details and economies of the invention will appear from the description to follow. The invention is pointed out in the claims.

A preferred embodiment of the invention is illustrated in the accompanying drawing, in which:

Fig. 1 is an end elevational view of a structure embodying my invention, fragments only of the wall or crate being illustrated, the means for connecting the crate walls to each other and to the deck being omitted.

Fig. 2 is an enlarged fragmentary view corresponding to that of Fig. 1 illustrating the stacked relationship of the pallets.

Fig. 3 is a fragmentary view looking from the left of Fig. 2, parts being broken away to show structural details.

Fig. 4 is an inverted or bottom view of one corner of the pallet.

In the embodiment of my invention illustrated, the top or deck designated generally by the numeral 1 comprises an upper series of spaced parallel slats or bars 2 and a lower series 3, these being welded or fixedly connected at their crossing points as indicated at 4 in Fig. 2. This provides a grid-like deck. The walls 5 and 6 of the crate are preferably collapsibly mounted on the deck; however, as this forms no part of my invention, it is not illustrated.

The base designated generally by the numeral 7 is formed of sheet metal members 8 and 9 disposed horizontally flatwise and welded together at their crossing or overlapping points. The base and deck are connected by legs which are superimposed on the base members and connected to the underside of the deck. These legs comprise inner and outer sheet metal members 10 and 11, the inner leg members having leg bottom members 12 desirably formed integrally therewith and which are superimposed upon and secured to the base desirably by welding as indicated at 13. The leg members are formed of sheet metal stock of approximately the width of the stock of the base members.

The leg base member has an upward offset 14 therein at the outer side of the base providing a downwardly facing socket or seat 15 engageable with the top of the receptacle or crate side member 6. The outer end of the base member 12 is directed downwardly at 16 while the outer leg member 11 is downwardly inclined and is lapped upon the portion 16 and secured thereto by spot welding as indicated at 17. The sheet metal reinforcing plate 18 is disposed within the leg and base members and is provided with laterally turned flanges 19 on its edges contacting the leg members and the base members and secured thereto as by spot welds 20. The plate 18 is notched at 21 at its outer corner to receive the upward offset and has a flange 22 welded to the top of the offset.

The upper corners of the plate 18 are notched at 23

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to receive the leg attaching bars 24 which are arranged on the inner sides of the leg members and welded thereto as indicated at 25. These leg attaching bars are common to the aligned legs and secure them together as a unit so that the bars 24 may be attached to the deck by means of welds 26. The lower edges of the notches 23 are flanged at 27 and these flanges may be spot welded to the bars 24 as indicated at 28 in Fig. 3.

With the parts thus arranged I provide a pallet structure as a whole and also a leg structure, which is relatively light in weight and at the same time very strong and rigid and capable of withstanding severe shocks and blows such as result from striking the legs with the prong of a lifting truck fork or the bumping of the legs to move the pallet or to position the pallet. The forming of the leg members of sheet metal stock permits their being of considerable width which facilitates their attachment to the associated parts at several points rather than merely a matter of a spot or restricted connection. In the embodiment illustrated, the central legs 29 are of V-shape and also formed of sheet metal; however, these form no part of my present invention.

The base members 8 and 9 are provided with longitudinal stiffening ribs 30, the stiffening ribs not being extended into their overlapping portions as is shown in the drawing. However, the overlapping portions 31 of the base members are provided with bosses 32, both lapping members desirably being provided with bosses as is shown in Fig. 2 with the bosses nesting. The bottoms of the bottom bosses are flush with or in the planes of the bottoms of the ribs 30 so that the bosses, in effect, serve as feet for the legs so that there are no bending or shearing stresses on the base members as a result of the load on the legs. This also permits the use of relatively light stock.

I have illustrated and described my invention in a highly practical embodiment thereof. I have not attempted to illustrate or describe certain embodiments and adaptations which I contemplate as it is believed that this disclosure will enable those skilled in the art to embody or adapt my invention as may be desired.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:

1. In a materials handling pallet, the combination of a deck, a base comprising spaced sheet metal base members of substantial width disposed horizontally flatwise in crossing relation and fixedly connected at their crossing points, legs superimposed on the base members and comprising inner and outer sheet metal leg members of a width corresponding substantially to the width of said base members, the inner leg members having bottom members integral therewith disposed upon and fixedly secured to overlapping portions of the base members, said bottom members having upwardly offset downwardly facing stacking recesses therein at the outer sides of the base members on which the legs are superimposed, the outer ends of the leg bottom members being directed downwardly and defining the outer walls of said stacking recesses, the outer leg members having their lower ends lapped upon and fixedly secured in side by side relation to the said downwardly directed ends of the bottom members, said outer leg members extending inwardly and upwardly from adjacent their lower ends, reinforcing plates disposed centrally between said leg members and disposed with the general planes thereof substantially at right angles to the general planes of the leg members and having flanged edges welded to the leg members and to the bottom member, the upper edges of said reinforcing plates being notched at the corners thereof, and leg attaching bars arranged in said notches in supported relation to the bottom thereof and welded to the inner sides of the inner and outer leg members of aligned legs, said attaching bars being fixedly secured to the underside of said deck.

2. In a materials handling pallet, the combination of a deck, a base comprising spaced sheet metal base members of substantial width disposed horizontally flatwise in crossing relation and fixedly connected at their crossing points, legs superimposed on the base members and comprising inner and outer sheet metal leg members of a width corresponding substantially to the width of said

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base members, the inner leg members having bottom members integral therewith disposed upon and fixedly secured to overlapping portions of the base members, the outer ends of the leg bottom members being directed downwardly, the outer leg members having their lower ends lapped upon in side by side engaging relation and fixedly secured to the said downwardly directed ends of the bottom members, reinforcing plates disposed between said leg members and disposed with the general planes thereof substantially at right angles to the general planes of the leg members and having their edges welded thereto and to the bottom member, and leg attaching bars welded to the sides of the inner and outer leg members of aligned legs, said attaching bars being fixedly secured to the underside of said deck.

3. In a materials handling pallet, the combination of a deck, a base comprising spaced sheet metal base members of substantial width disposed horizontally flatwise in crossing relation and fixedly connected at their crossing points, legs superimposed on the base members and comprising inner and outer sheet metal leg members, the inner leg members having bottom members integral therewith disposed upon and fixedly secured to overlapping portions of the base members, the outer leg members being fixedly secured to the outer ends of the bottom members, and reinforcing plates disposed centrally between said leg members and disposed with the general planes thereof substantially at right angles to the general planes of the leg members and having flanged edges welded to the leg members and to the bottom members, the upper edges of said reinforcing plates being notched and having flanges at the bottom of the notches, leg attaching bars supportingly mounted on said flanges and arranged in said notches and welded to the inner sides of the leg members of aligned legs, said attaching bars being fixedly secured to the underside of said deck.

4. Leg units for materials handling pallets comprising inner and outer sheet metal leg members and bottom members integrally connected to the lower ends of said inner leg members, the outer ends of the bottom members being angularly disposed to provide upward offsets, the lower ends of the outer leg members being lapped upon said outer ends of the bottom members and welded thereto, reinforcing plates disposed centrally between said leg members and disposed with the general planes thereof substantially at right angles to the general planes of the leg members and having flanged edges welded to the leg members and to the bottom members, the outer lower cor-

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ners of the reinforcing plates being notched to receive the upward offsets of the bottom members and being disposed to engage the upper sides of said offsets to brace the same, said offsets providing downwardly facing stacking recesses, the upper corners of the reinforcing plates being notched and the lower edges of the notches being flanged, and leg attaching bars arranged in the notches and welded to the inner sides of the leg members of aligned legs.

5. A leg for a materials handling pallet comprising inner and outer sheet metal leg members, the inner leg member having a bottom member integral therewith, said bottom member having an upwardly offset downwardly facing recess at its outer end, the outer end of the bottom member being directed downwardly, the outer leg member from adjacent its lower end being inclined upwardly, its lower end being lapped upon and welded to the said downwardly directed end of the bottom member, and a reinforcing plate disposed with the general plane thereof substantially at right angles to the general planes of the leg members and disposed centrally between said leg members and upon said bottom member and having flanged edges welded thereto and to the bottom member, the lower outer corner of said plate being notched to receive the upwardly offset portion of the bottom member.

6. A leg for a materials handling pallet comprising inner and outer sheet metal leg members and a bottom member integrally connected thereto, said bottom member having an upwardly offset downwardly facing recess at its outer end, and a reinforcing plate disposed with the general plane thereof substantially at right angles to the general planes of the leg members and disposed centrally between said leg members and upon said bottom member and welded to the leg members and to the bottom member, the lower outer corner of said plate being notched to receive the upwardly offset portion of the bottom member and to engage the upper side of the upwardly offset portion to brace the same.

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