Oct. 15, 1957 C. C. AVERILL 2,809,796

MATERIAL HANDLING PALLET

Filed May 21, 1953 2 Sheets-Sheet 1

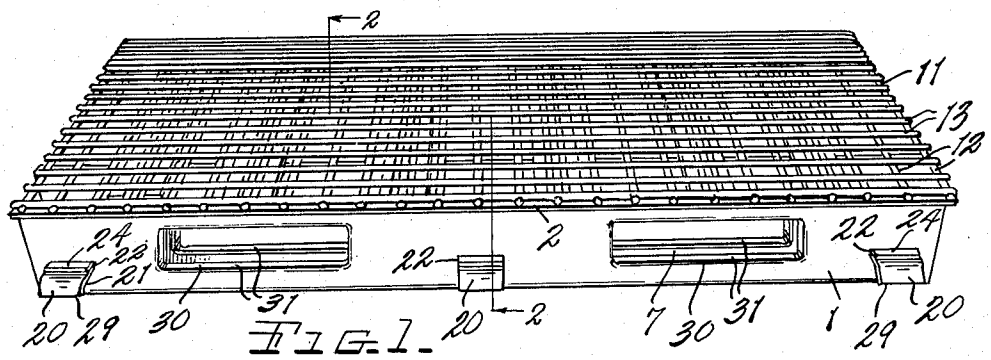


FIG. 1.

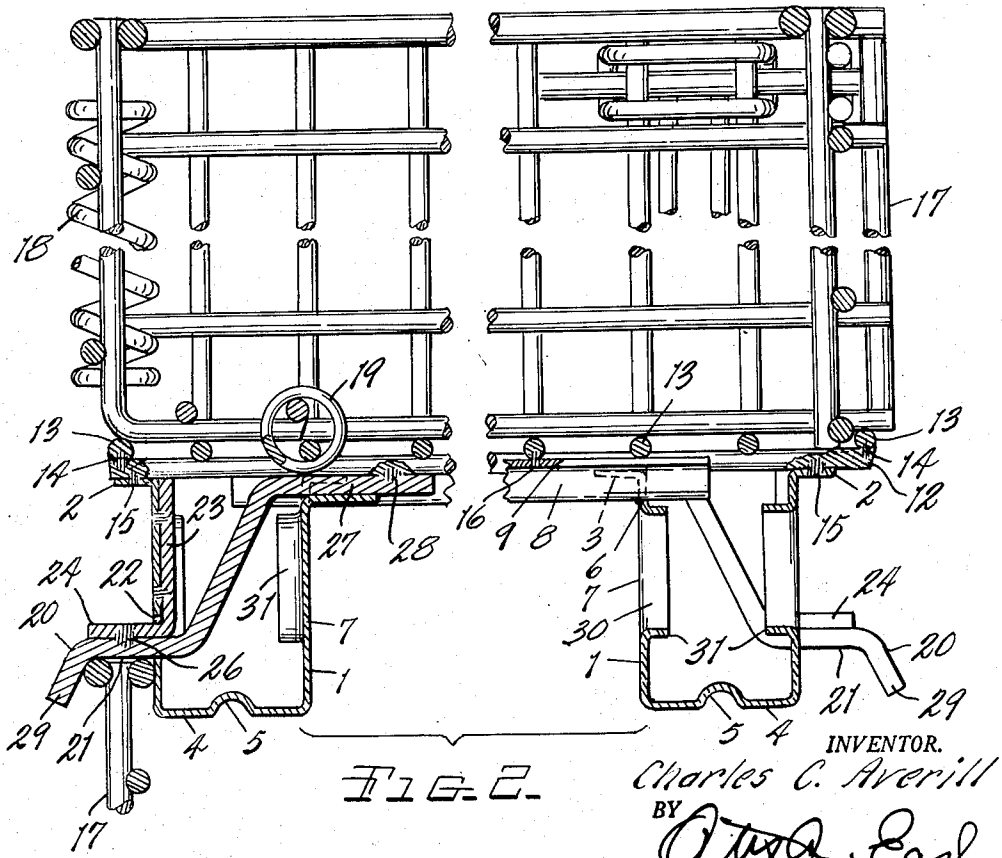


FIG. 2.

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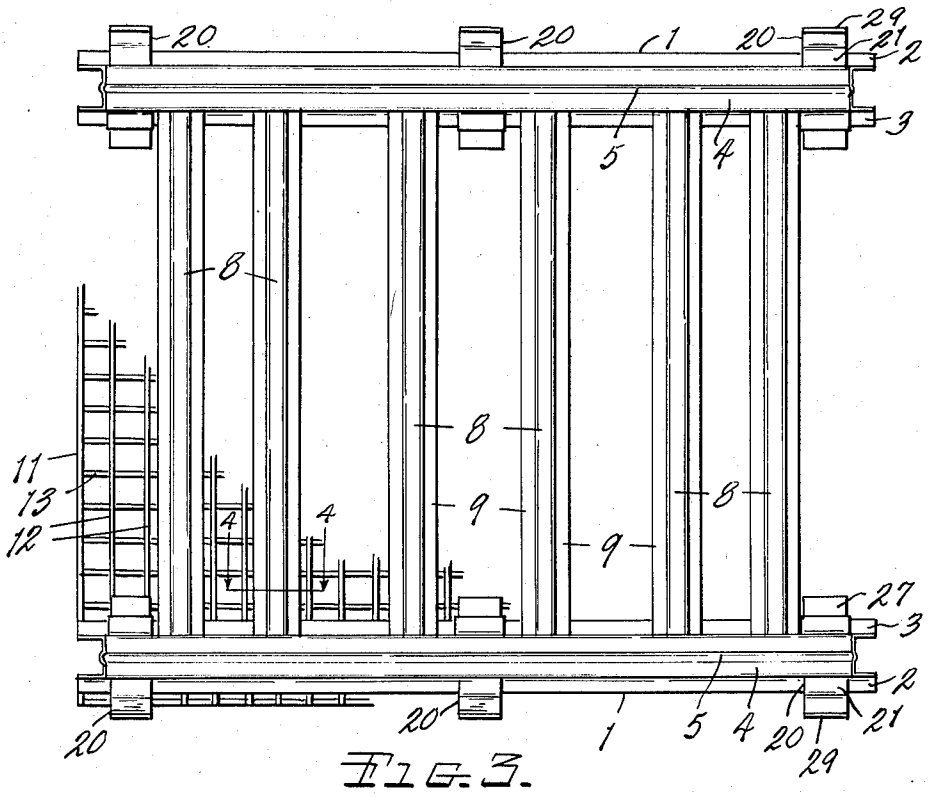


FIG. 3.

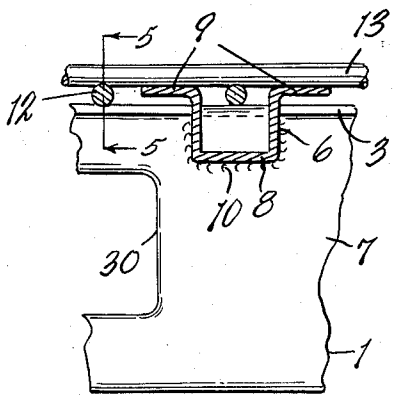


FIG 4

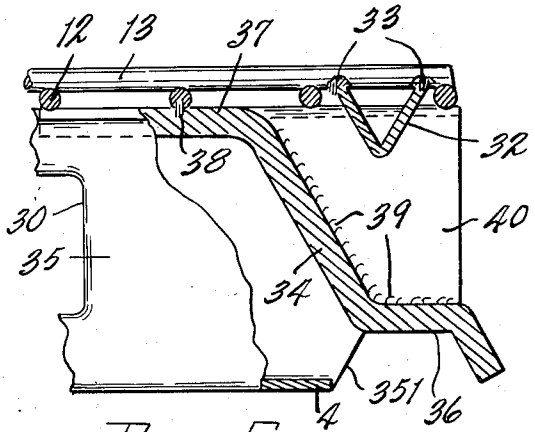


FIG. 6.

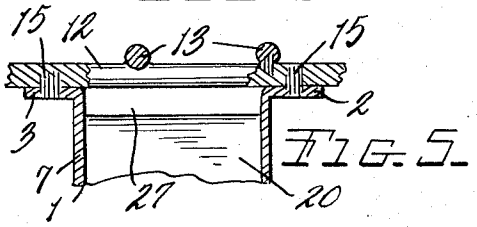


FIG. 5.

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MATERIAL HANDLING PALLET

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Application May 21, 1953, Serial No. 356,479

4 Claims. (Cl. 248—120)

This invention relates to improvements in a material handling pallet.

The main objects of this invention are:

First, to provide a material handling pallet comprising a deck supporting unit which may be mainly fabricated of sheet metal stock and one in which the parts are formed and arranged so that they may be relatively light in weight and at the same time are strong and rigid and capable of withstanding heavy loads and shocks.

Second, to provide a material handling pallet having an open mesh deck formed of wire slats in which the deck is very effectively supported and connected to a supporting sub-structure.

Third, to provide a walled stacking pallet in which superimposed pallets are effectively supported in stacking relation and the load of the superimposed pallet is well distributed on the bottom pallet.

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 drawings, in which:

Fig. 1 is a side perspective view of a pallet embodying the features of my invention with the walls omitted.

Fig. 2 is an enlarged fragmentary transverse section on a line corresponding to the broken line 2—2 of Fig. 1 of a pallet provided with walls which are shown in erected position, a fragment of another pallet being shown to show stacking relation of superimposed walled pallets.

Fig. 3 is a fragmentary inverted view with the walls omitted.

Fig. 4 is an enlarged fragmentary view in section on a line corresponding to 4—4 of Fig. 3.

Fig. 5 is an enlarged fragmentary view on a line corresponding to line 5—5 of Fig. 4.

Fig. 6 is an enlarged fragmentary view corresponding to that of Fig. 4 showing a modified form or embodiment of the invention.

The embodiment of my invention illustrated comprises a pair of laterally spaced base members 1 of upwardly facing channel section. These base members have outturned flanges 2 and 3 which constitute reinforcing members and also attaching members for associated parts as will be further pointed out. These base members are desirably fabricated from sheet metal and the web portions 4 thereof have upwardly projecting longitudinal reinforcing ribs 5. These base members constitute the legs of the pallet.

The inner legs of the base members have a series of oppositely disposed or aligned notches 6 in their inner legs 7 in which the cross or bed members 8 are disposed. These members 8 being stated on the bottoms of the notches, as shown in Fig. 4.

The bed members 8 are of upwardly facing channel section and are desirably fabricated of sheet metal stock and are provided with outturned flanges 9 which are disposed in a plane above the plane of the flanges 3 of the base members. The cross or bed members 8 are welded to

the inner legs 7 of the base members, as indicated at 10 in Fig. 4.

The deck designated generally by the numeral 11 is, in the embodiment illustrated, formed of a bottom series of spaced parallel slats 12 therein and an upper series of spaced parallel slats 13. The series of slots being disposed in crossed relation and welded to each other at their crossing point, as indicated at 14. This deck is superimposed on the flanges of the base and bed members with certain of the lower series of slats 12 resting upon the flanges 2 and 3 and fixedly secured thereto desirably by welding, as indicated at 15, see Figs. 2 and 5.

The flanges 9 of the cross members are in supported engagement with the upper series of deck slats and are fixedly secured thereto desirably by welding, as indicated at 16. This provides a very effective support for the deck which may be formed of relatively light weight and at the same time is capable of carryng heavy loads.

The deck also constitutes tie members for the legs of the base members as well as a stretcher or connector member for the base members which, as stated, constitute the leg of the pallet.

In the embodiment illustrated in Fig. 2 walls 17 are provided. Pair of these walls being collapsibly connected at diagonaly opposite corners of the crate as by means of the coils 18 and pairs being collapsibly connected to the deck as by means of the coils 19. However, as the details of the walls form no part of my present invention they are not further described herein. They are illustrated to disclose the purpose of the stacking irons 20 which are arranged to cooperate with the bed members and form downwardly facing recesses 21 adapted to engage the upper edges of opposed pairs of walls 17, see Fig. 2.

In the embodiment illustrated the outer legs of the base members are provided with longitudinally spaced openings 22, there being openings adjacent the ends of the base members and centrally thereof. The angled reinforcing plates 23 are disposed on the inner sides of the outer legs of the base members with their arms 23 projecting through the openings 24 therein.

The arms 25 of the angled stacking members 20 are disposed through the openings 22 on the underside of the arms 24 of the reinforcing members and fixedly secured thereto as by welds 26. The stacking irons having inwardly projecting arms 27 at their upper ends disposed in supported engagement with the flanges 3 of the base members and are welded at 28 to the overlying deck slats. The stacking irons have downturned outer ends 29 which are spaced from the base members to provide downwardly facing stacking recesses.

To facilitate the picking up of the pallets by a forked lifting truck, the base members have elongated spaced fork receiving openings 30, the openings being surrounded by inwardly projecting reinforcing flanges 31.

In the embodiment shown in Fig. 6, the bed members 32 are of V-shape and the flanges are omitted. The upper edges of these bed members are welded to the crossing upper series of deck slats, as shown at 33.

In this embodiment the stacking irons 34 project from the ends of the base members 35 instead of through holes in the base members as in the embodiment shown in Figs. 1 to 5. In this embodiment the stacking irons coact with the end edges 351 of the base members in providing the downwardly facing wall engaging recesses 36. The arms 37 at the upper end of the stacking irons are welded at 38 to the deck slats.

In this embodiment the stacking irons are of a width to fit between the legs of the bed members and are welded thereto at 39. The ends of the bed members are extended at 40 so that the horizontal portion of the leg members may be welded thereto, as shown at 39 in Fig. 6. This provides a rigid connection for the stacking irons

to the base members and deck. It is sometimes desired to have the stacking irons engage the end walls of the receptacle instead of the side walls thereof.

The embodiments of my invention illustrated may be manufactured of comparatively light weight stock and at the same time are capable of carrying very heavy loads and withstanding severe shocks.

I have illustrated and described my invention in a highly practical embodiment thereof. I have not attempted to illustrate or describe other embodiments or adaptations which I contemplate as it is believed 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. A materials handling pallet comprising a pair of laterally spaced elongated base members of upwardly facing channel section constituting the legs of the pallet, the inner legs of the base members having a plurality of longitudinally spaced aligned notches therein, a plurality of deck members disposed in said notches and fixedly secured in said bed members with the upper edges of the bed members in a plane above the plane of the upper edges of the base members, a deck comprising an upward series and a lower series of fixedly connected cross slats disposed on said base and bed members with the slats of the upper series being in supported relation to and fixedly secured to the bed members, the outer legs of the base members having openings therein spaced upwardly from the bottoms thereof, angle shaped reinforcing members disposed with one arm thereof on the inner side of the outer leg members and fixedly secured thereto and the other projecting through said openings therein, and angled stacking irons disposed through said openings and fixedly secured to the outwardly projecting arms of said reinforcing members and having downturned outer ends spaced from and coacting with the outer sides of the base members to provide downwardly facing wall engaging recesses, said stacking irons having inwardly projecting arms at their upper ends disposed in supported engagement with the inner legs of the base members and fixedly secured to the underside of the deck.

2. A materials handling pallet comprising a pair of laterally spaced elongated base members of upwardly facing channel section constituting the legs of the pallet, the inner legs of the base members having a plurality of longitudinally spaced aligned notches therein, a plurality of deck bed members disposed in said notches and fixedly secured in said bed members, a deck disposed on said base and bed members and fixedly secured thereto, the outer legs of the base members having openings therein spaced upwardly from the bottoms thereof, angle shaped reinforcing members disposed with one arm thereof on the inner sides of the outer leg members and fixedly secured thereto and the other projecting through said openings

therein, and stacking irons disposed through said openings and fixedly secured to the outwardly projecting arms of said reinforcing members and having downturned outer ends spaced from and coacting with the outer sides of the base members to provide downwardly facing wall engaging recesses, the inner ends of said stacking irons being in supported engagement with the inner legs of the base members and fixedly secured thereto.

3. A materials handling pallet comprising a deck, elongated base members of upwardly facing channel section constituting legs for the pallet and fixedly secured thereto, the outer legs of the base members having spaced openings therein, reinforcing members secured to the inner side of the outer legs of the base members with one arm thereof projecting outwardly through said openings, and angled stacking irons disposed through said openings in supported engagement with said reinforcing members and having downturned outer ends spaced from the outer sides of the leg members and coacting therewith to provide wall engaging stacking recesses, the inner ends of the stacking irons being disposed in supported engagement with the inner legs of the base members and fixedly secured to the deck.

4. A materials handling pallet comprising a deck, elongated base members of upwardly facing channel section constituting legs for the pallet and fixedly secured thereto, the outer legs of the base members having spaced openings therein, reinforcing members secured to said legs in the vertical planes of said openings therein and stacking irons disposed through said openings and fixedly and supportedly connected to said reinforcing members, and having downturned outer ends spaced from the outer sides of the leg members and coacting therewith to provide wall engaging stacking recesses, the inner ends of the stacking irons being disposed in supported engagement with the inner legs of the base members and fixedly connected to the deck.

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