

- [54] **PALLET WITH FOLDING CORNER POSTS**  
[75] Inventors: **Michizo Izawa**, Tokyo; **Takeo Izawa**,  
Kanagawa-ken, both of Japan  
[73] Assignee: **G. R. P. Company, Ltd.**, Tokyo,  
Japan  
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*Primary Examiner—Paul R. Gilliam*  
*Attorney, Agent, or Firm—Hans Berman*

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[58] **Field of Search**..... 108/55, 56, 129; 297/357;  
248/188.6; 287/2, 3, 99

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[57] **ABSTRACT**

The four upright posts which project from the corners of a pallet platform each have a tubular base portion fixed to the platform and a top portion of the same tubular material. In the operative position of the post, longitudinally tapering recesses and projections of the two portions conformingly engage each other, and the bore of the top portion is conformingly engaged by a core fixed to the base portion and projecting from the bore of the same. A transverse pin between two projections of the top portion is received in a longitudinal guide slot of the core, thereby permitting the top portion to be lifted longitudinally from its operative position to an intermediate position in which the projections and recesses are disengaged, and thereafter to be folded toward the platform for compact storage of the pallet or outward to facilitate loading and unloading.

### 3 Claims, 3 Drawing Figures

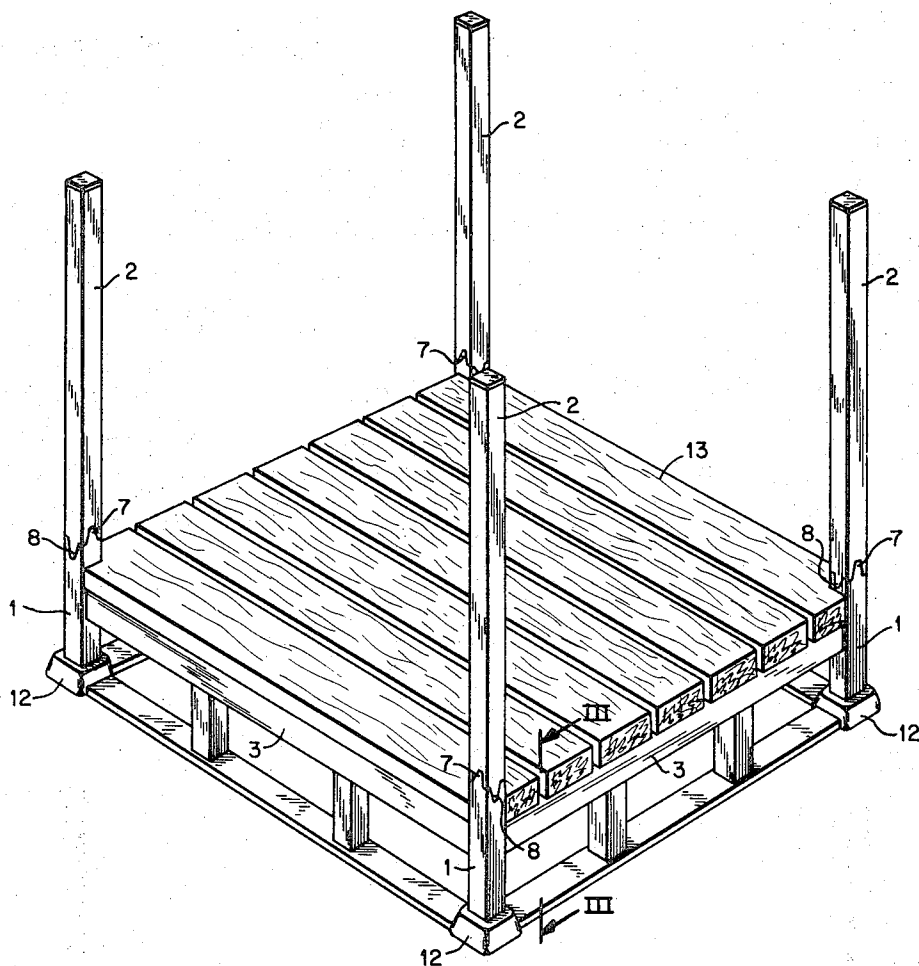




FIG. 2

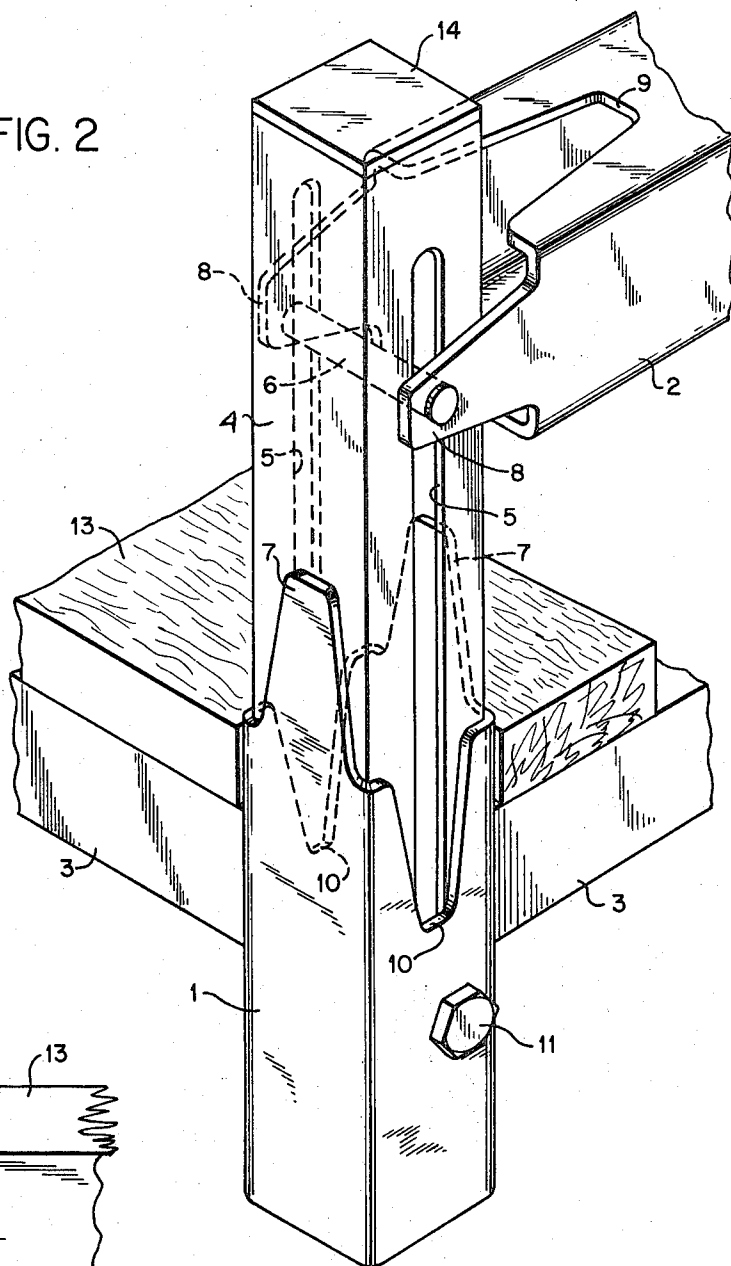
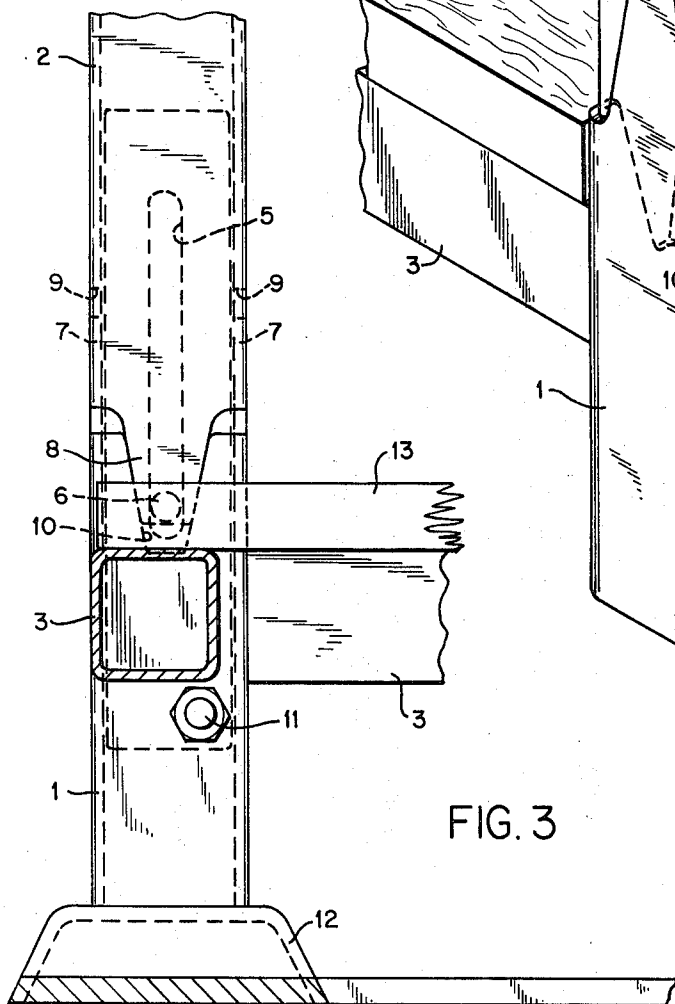


FIG. 3



**PALLET WITH FOLDING CORNER POSTS**

This invention relates to pallets, and particularly to an improved pallet of the type having posts distributed about the circumference of the loading surface and capable of being folded down toward the surface for compact storage.

The posts of many known pallets are rather shaky in the erected or operative position, require relatively great effort for folding and erection, and present projections in the erected condition which may catch and damage packages loaded on the pallet.

The primary object of the invention is the provision of a pallet of the type generally described above which is free of the shortcomings of the known devices, more specifically the provision of a pallet whose erected posts are rigid, and become more rigid under an applied load, are easily erected and folded, and have a smooth surface when erected.

With these and other objects in view, each post on the pallet of the invention has an elongated base portion fixedly fastened to the pallet platform and an elongated top portion, each portion having an outer skin. One portion is formed with a bore extending longitudinally within the skin thereof. The other portion has a core part which longitudinally projects from the skin of the other portion and is conformingly received in the afore-mentioned bore in an operative position in which the two portions are aligned longitudinally and substantially at right angles to the loading surface of the pallet.

Longitudinal projections and recesses in the two skins conformingly engage each other in the operative position. The two post portions are longitudinally guided between the operative position and an intermediate position by cooperating guide means on the one portion and the core part of the second portion. The projections and recesses of the two skins are disengaged in the intermediate position, and the top portion may be moved angularly toward and away from longitudinal alignment with the base portion in the intermediate position on a hinge device connecting the core part and the one post portion.

Other features, additional objects, and many of the attendant advantages of this invention will readily be appreciated as the same becomes better understood by the following detailed description of a preferred embodiment when considered in connection with the appended drawing in which:

FIG. 1 shows a pallet of the invention with erected corner posts in a perspective view;

FIG. 2 shows one corner post of the pallet of FIG. 1 and associated elements in the folded condition of the post in a fragmentary view on a larger scale; and

FIG. 3 shows the pallet of FIG. 1 in fragmentary section on the line III—III on a scale intermediate those of FIGS. 1 and 2.

Referring now to the drawing in detail, and initially to FIG. 1, the illustrated pallet is provided with four corner posts, each having a base portion 1 and a longer top portion 2. The two portions consist of steel tubes having the same square cross section over practically their entire length. The base portions 1 are fixed to the four corners of the base frame 3 of the pallet which partly consists of the same tubular material. Parallel, transversely spaced, wooden slats 13 cover the frame 3 and form the loading surface of the platform. The lower end of the base portion 1 of each post is sup-

ported on a footing 12 on the base frame 3, and the upper end of each base portion 1, as far as is seen in FIG. 1, projects a very small distance beyond the loading platform.

A tubular core 4 of square cross section is conformingly received in the bore of each base portion 1, as is best seen in FIG. 2. It is fixedly fastened to the outer skin of the base portion 1 by a bolt 11 passing through aligned openings in the skin of the base portion 1 and the core 4, and secured by a nut. It projects upward beyond the outer tubular skin of the base portion 1 which alone is seen in FIG. 1, the projecting part of the core 4 being received in the bore of the top portion 2 in the erected or operative position of the posts seen in FIG. 1. Upright, longitudinal guide slots 5 in opposite walls of the core 4 extend well above the topmost part of the outer skin of the base portion 1 and slidably and rotatably receive a cylindrical hinge pin 6.

Two longitudinal projections 7 on the outer skin of the base portion 1 taper in an upward direction, and two similar projections 8 on the top portion 2 also taper longitudinally, the hinge pin 6 being fastened to the projections 8 near their narrow free ends. In the erected condition of the post shown in FIG. 1, the projections 7, 8 are conformingly received in recesses 9, 10 in those sides of the other post portion which do not carry projections.

In the operative position illustrated in FIGS. 1 and 3, the two portions of each post are firmly interlocked by the core part 4 of the base portion 1 which is conformingly received in the bores of both portions, and by the projections 7, 8 wedged in the conforming recesses 9, 10. If several loaded pallets are stacked, as is customary, the weight of the superposed pallets rests on the top portions 2 and more rigidly wedges the two post portions to each other.

When it is desired to fold a post, its top portion 2 is readily lifted to an intermediate position, similar to that shown in FIG. 2, in which the two portions 1, 2 are still aligned longitudinally, but the projections 7, 8 are fully disengaged from the associated recesses 9, 10, thereby permitting the top portion 2 to be tilted toward the loading surface, as is shown in FIG. 2, and thereafter lowered until it rests on the slats 13 for compact storage of the pallets. A cap 14 protects the exposed longitudinal end of the core part 4. During loading and unloading, it may be more convenient to tilt the upper post portions 2 from the intermediate position outward and away from the loading platform.

While the illustrated arrangement, in which the core 4 is a fixed part of the base portion 1 and releasably engages the top portion 2, is usually preferred, this relationship of the several elements may be subjected to permutations and variations without losing all the advantages inherent in the illustrated embodiment. When the core 4 is a fixed part of the base portion 1, as specifically illustrated and described above, the top portion 2 may be provided with the guide slots 5, and the hinge pin 6 may be mounted on the core part 4.

Other variations will readily suggest themselves to those skilled in the art, and it should be understood, therefore, that this invention may be practiced otherwise than as specifically illustrated, and is to be limited solely by the scope and spirit of the appended claims.

What is claimed is:

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1. A pallet comprising a platform defining a loading surface and a plurality of posts distributed about the circumference of said surface,
  - a. each post having an elongated base portion fixedly fastened to said platform and an elongated top portion, 5
  - b. each portion having an outer skin,
  - c. said top portion being formed with an elongated bore extending longitudinally within said skin of the top portion, 10
  - d. said base portion having an elongated core part attached thereto, said core part longitudinally projecting from said skin of said base portion and being received conformingly in said bore of the top portion in an operative position in which said portions are aligned longitudinally and substantially at right angles to said surface, 15
    1. said skins, said bore, and said core part each being of substantially uniform angular cross section, 20
  - e. each of said skins being formed with two longitudinal projections and recesses, each projection conformingly engaging a recess on the other portion in said operative position,
    1. in each of said portions, said two recesses being arranged opposite each other, and said projec-

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- tions being arranged opposite each other and angularly offset from said recesses,
2. each recess and elongation tapering in the direction of elongation of the associated portion,
3. a portion of said core part projecting longitudinally from said skin of said base portion beyond the projections of said base portion,
4. said core part being formed with a longitudinal slot extending into said projecting portion of said core part, and
- f. a hinge pin connecting the two projections of said top portion, said hinge pin being received in said slot and guiding longitudinal movement of said top portion relative to said base portion toward and away from said operative position while permitting angular movement of the top portion relative to the base portion when said projections and recesses are disengaged.
2. A pallet as set forth in claim 1, wherein said cross section is rectangular.
3. A pallet as set forth in claim 1, wherein said platform is rectangular, one of said base portions being fastened to each corner of said platform, the length of each top portion being much greater than the length of the associated base portion.

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