April 26, 1966 J. J. SEPE ETAL 3,247,810

STRIP PALLET

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Fig. 1

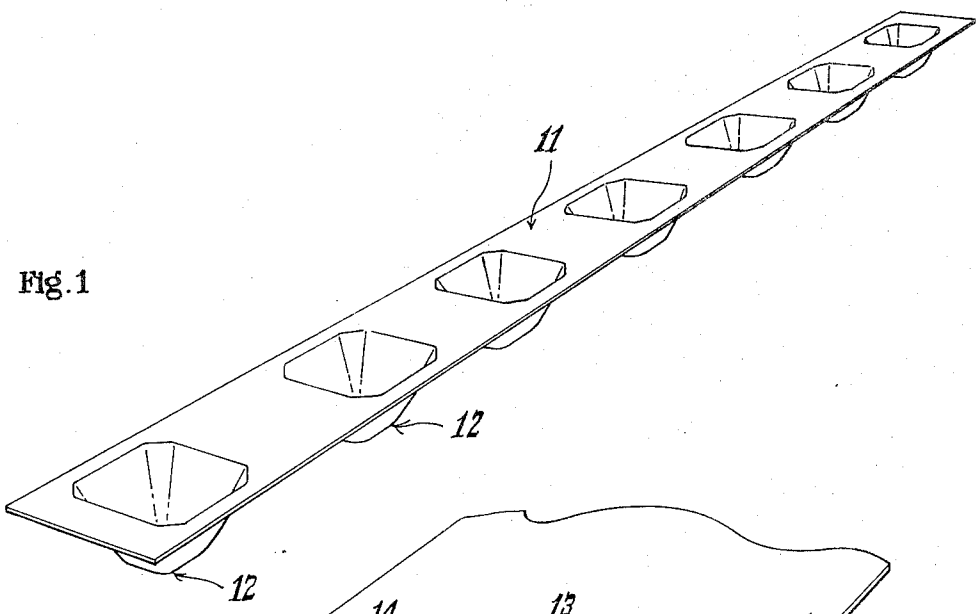
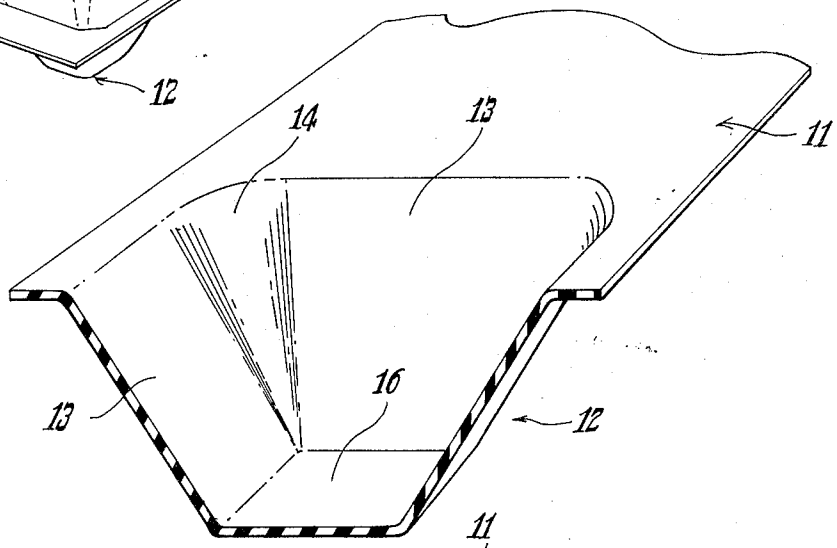


Fig. 2



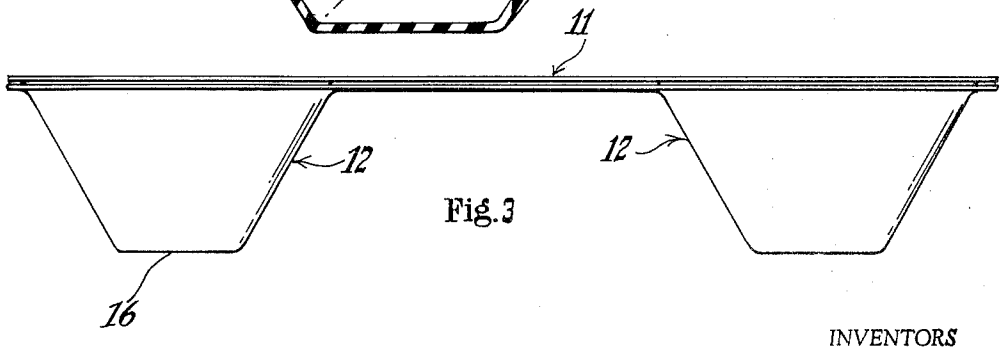


Fig. 3

INVENTORS
JOHN J. SEPE
JOHN C. NATALICIO

BY
Warren T. Jessup
ATTORNEY

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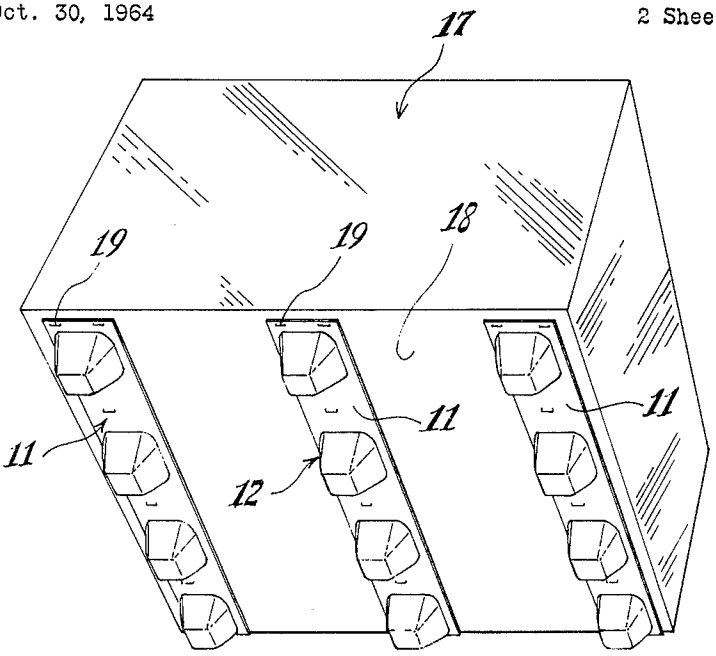


Fig. 4

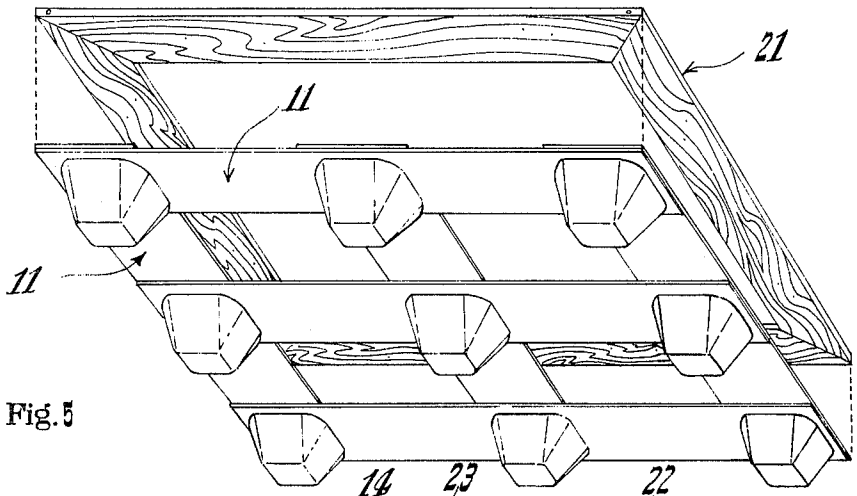


Fig. 5

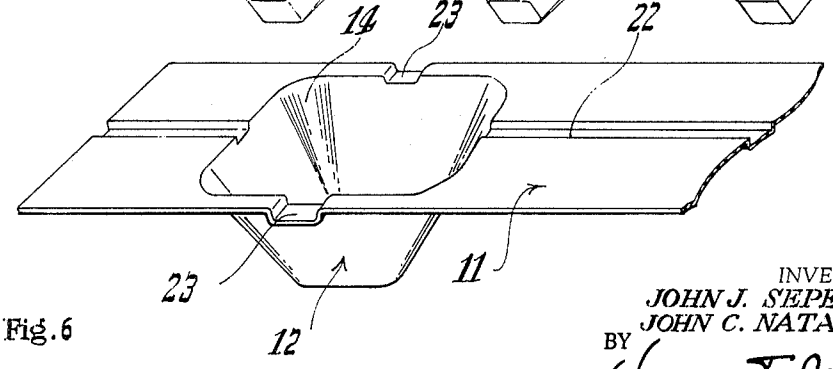


Fig. 6

INVENTORS
JOHN J. SEPE
JOHN C. NATALICIO
BY
Warren T. Jessup
ATTORNEY

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3,247,810

STRIP PALLET

John J. Sepe, Glendale, and John C. Natalicio, Granada Hills, Calif., assignors to Rocket Jet Engineering Corp., Glendale, Calif., a corporation of Delaware

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7 Claims. (Cl. 108—53)

This invention relates to a load supporting structure and it is in the nature of a pallet module, which can be used in whatever size and quantity is required to solve the problem at hand.

It is an object of this invention to provide a pallet-like structure which may be used to support a load spaced from and above a floor.

It is another object of this invention to provide such a structure as may be made so very inexpensively that it can, with good economy, be thrown away after one use if desired.

It is another object of this invention to design a module type pallet structure ideally suited for manufacture from inexpensive sheet plastic.

It is another object of this invention to provide a pallet-like structure of such configuration that identical structures may be nested snugly one within the other, thereby minimizing space requirements during storage and transport.

It is another object of this invention to provide a pallet-like structure which may be manufactured and stocked in a single universal size, and from which individual sizes or lengths may be cut as desired and arranged as desired, depending on the job to be accomplished at the moment.

It is a further object of this invention to provide a lightweight, inexpensive, and universally adaptable pallet-like structure for supporting a flat-bottomed load, spaced above a storage floor.

It is another object of this invention to provide a load structure consisting of a substantially flat-bottomed load positioned above the floor by a plurality of strip pallets.

In accordance with these and other objects which will become apparent hereinafter, the present invention will now be described with reference to the accompanying drawings wherein:

FIG. 1 is a perspective view of a preferred form of the strip pallet constituting the present invention.

FIG. 2 is an enlarged fragmentary cross-section showing one of the dimpled legs of the strip pallet.

FIG. 3 is a side elevation showing how a plurality of strip pallets may be nested for storage or transportation.

FIG. 4 is a view looking up on the underside of a load to which is secured three strip pallets.

FIG. 5 is an underside perspective view of another arrangement of strip pallets in accordance with the present invention.

FIG. 6 is a fragmentary perspective view of a modified form of structure.

Referring to the drawings, **11** denotes an elongate strip of sheet material having a length several times its width. The material is preferably a sheet of plastic which is susceptible of being molded by vacuum forming or match metal dies or other appropriate processes.

Spaced along the length of strip **11** are a plurality of downwardly extending dimples **12**, which constitute support legs for the pallet strip. Each dimple or leg **12** is generally in the form of a truncated pyramid, having sloping sides **13** connected by rounded corners **14** and terminating in a flat bottom **16** where the pyramid is truncated. The bottom **16** is adapted to rest on a floor. The upper surface of the strip **11** is adapted to contact the under surface of the load. As shown in

FIG. 2 it is preferred to maintain the thickness of the sheet **11** substantially constant throughout, although this is not a critical feature of the invention.

The sloping sides **13** and rounded corners **14** are inclined to the horizontal at an angle at approximately 60°. This enables a plurality of strips to be stacked in nested arrangement as shown in FIG. 3, with one leg telescoped within the one next below. This minimizes the space required for storage and transport when the strip pallets are not in use.

It is preferred to fabricate and inventory the strip pallet in long strips having a large number of dimpled legs **12**, as shown in FIG. 1. When need for pallet strips arises, sufficient numbers and of proper length are cut off to accommodate the undersurface of the load. As shown in FIG. 4, a typical load, consisting of a large box-like structure **17**, has secured to the undersurface **18** thereof three parallel pallet strips **11**. In this example each strip has four of the legs **12**. If desired, bonding means may be provided to secure the strips **11** to the undersurface **18**. Such bonding means are shown by way of an example as staples **19** passed through the strip from the underside and into the bottom **18**. With a load arranged as shown in FIG. 4, it is possible to lift the load **17** by means of a fork lift truck, transport it to another location and set it down, and then withdraw the forks. The forks may be inserted either longitudinally, parallel to the strips **11**, or transverse, in which case they would pass between adjacent legs **12**.

It is not necessary to secure the strips **11** to the under surface of the load. If desired the strips may be simply placed on the floor in their proper position, and a load placed over the strips by any suitable loading apparatus such as a fork lift truck. The fork may then be withdrawn, leaving the load spaced above the floor and supported by the legs **12**.

The present invention is ideally suited for making, in module fashion, a relatively rigid supporting platform by arranging the strips as shown in FIG. 5. In this instance the legs **12** of the upper layer of strips **11'** nest within the legs of the lower layer of strips **11''**. This nesting, however, unlike that shown in FIG. 3, is with the strips arranged at right angles to provide a rectangular frame-like structure in which the legs are of double strength by virtue of the nesting. Although FIG. 5 illustrates the provision of center supporting strips **11**, these are not always necessary. If desired the structure may be limited to a simple rectangular frame, having only the outer strips.

The structure shown in FIG. 5 is especially suited to the provision of a pallet or skid for supporting heavy pieces of machinery, and this may be accompanied by the provision of a sturdy wooden frame **21** which sits atop the pallet structure at the perimeter thereof.

Comparison of FIGS. 4 and 5 illustrates the module nature of this invention. That is, in FIG. 4 the load **17** is of such a size as to call for strips having four of the legs **12**; while in FIG. 5 the load is assumed to be smaller and require the cutting of lengths having only three legs.

The pyramid-like nature of the legs, best seen in FIGS. 1 and 2, serves as a locking arrangement when strips are nested transversely, as shown in FIG. 5. Thus, even without any securement or bonding the interlocking prevents one strip from turning relative to the strip into which it is nesting.

The pallet module of the present invention may, if desired, have only a single dimpled leg, thereby in some cases simplifying storage and rendering the use more versatile. That is, the strip **11** may be made and/or stored substantially as a square, having only a single leg **12** centrally located therein. In this form, the pallet-leg

would usually be stapled or otherwise secured to the underside of the load. However, the flat bottom of the leg **12** does permit a plurality of such legs to be spaced judiciously over a floor area to receive a load resting thereon, without securement.

The strip pallet of the present invention is designed primarily for load structures which have their own lateral bending strength; that is, those which have a firm and solid bottom, such as the bottom **18** shown in FIG. 4. Thus, the primary purpose of the present strip pallet is to take the vertical compression force of the load **17** and support it above the floor. If bending strength is desired, the strip **11** may be provided, as shown in FIG. 6, with a downwardly extending longitudinal strengthening depression **22** that gives longitudinal ridgidity to the structure. In order to accommodate the crossing of such strips in the manner shown in FIG. 5, a complementary groove **23** is provided at each leg **12** into which the groove **22** may seat.

While the instant invention has been shown and described herein in what is conceived to be the most practical and preferred embodiments, it is recognized that departures may be made therefrom within the scope of the invention which is therefore not to be limited to the details disclosed herein, but is to be afforded the full scope of the invention as hereinafter claimed.

What is claimed is:

1. Support structure adapted to cooperate with another such structure to form a free-standing pallet or to cooperate with an associated burden in order to support a load spaced from a floor, comprising:

an elongated strip of sheet material having a length at least several times its width,

said sheet being dimpled downwardly in a plurality of discrete integral dimples forming a single line along the length of said sheet, said dimples constituting legs adapted to rest on the floor,

the upper surface of said sheet being adapted to contact and, in conjunction with like sheets, support a load spaced from the floor.

2. Structure in accordance with claim **1** wherein each of said legs is in the form of a truncated pyramid, whereby when one strip is placed transverse to another, with a respective pair of legs nesting, the nested sides of the pyramids prevent the two strips from turning relative to each other.

3. Load structure comprising:

a plurality of discrete elongate strips of sheet material,

each strip being provided with a plurality of downwardly extending dimples arranged in a single row lengthwise of the strip, said dimples constituting legs resting on a floor,

at least one channel rib extending the length of each strip and interrupted by each dimple, and a like number and spacing of channel ribs crossing laterally through each dimple, whereby the channel ribs will nest whenever said strips are stacked either in superimposed position, or at 90° relationship, with one dimple nested in another,

a load having a substantially flat bottom,

the upper surface of said strips engaging said bottom, thereby to support said load spaced from the floor by said legs.

4. Structure in accordance with claim **3** including bonding means for securing said strips to said bottom.

5. Structure in accordance with claim **3** wherein said strips are disposed parallel to each other beneath said load.

6. Structure in accordance with claim **3** wherein said strips are disposed in the form of a rectangular frame, with a leg of one strip nested within a leg of a transverse strip, at each corner of said frame.

7. A pallet to support a load spaced from a floor, comprising:

an elongated strip of sheet material having a length at least several times its width,

said sheet being dimpled downwardly in a plurality of discrete dimples forming a single line along the length of said sheet, said dimples constituting legs to rest on the floor,

each dimple having an exterior surface configuration and an interior surface configuration of complementary size and form providing a plurality of separate and distinct nesting positions wherein one dimple nested in another will lock in said position against rotational movement in the plane of said strip of sheet material,

whereby, the upper surface of said sheet is adapted to contact and, in conjunction with like sheets, support a load spaced from the floor.

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FRANK B. SHERRY, *Primary Examiner.*