United States Patent

Steele, Jr. et al.

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[54] **PALLET PROP**

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[52] **U.S. Cl.** **108/51**, 108/1, 108/11, 248/188.2

[51] **Int. Cl.** **B65d 19/18**

[58] **Field of Search**.....108/51–58, 1, 11; 248/188.2, 351, 357, 228; 24/81 B, 81 C; 20/92

[56] **References Cited**

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[57] **ABSTRACT**

A spacing block assembly including an integral spring clip portion overlying a spacer portion of the assembly and designed to be utilized in proping up one side marginal edge portion of a pallet with the spring clip portion clampingly engaged with an elongated structural member of the pallet extending along the one side thereof to be blocked or spaced above the support surface upon which the remote side of the pallet rests. The form of the spacing block specifically illustrated in the drawing includes a resilient strap member bent into S-shaped form so as to include three vertically spaced generally parallel flange portions and a spacer block is frictionally gripped and retained between the lowermost flange portion and the intermediate flange portion while a clamp throat or opening is defined between the intermediate flange portion and the uppermost flange portion for receiving an elongated side structural member of a pallet therein with the structural member frictionally gripped between the intermediate flange portion and the upper flange portion.

2 Claims, 5 Drawing Figures

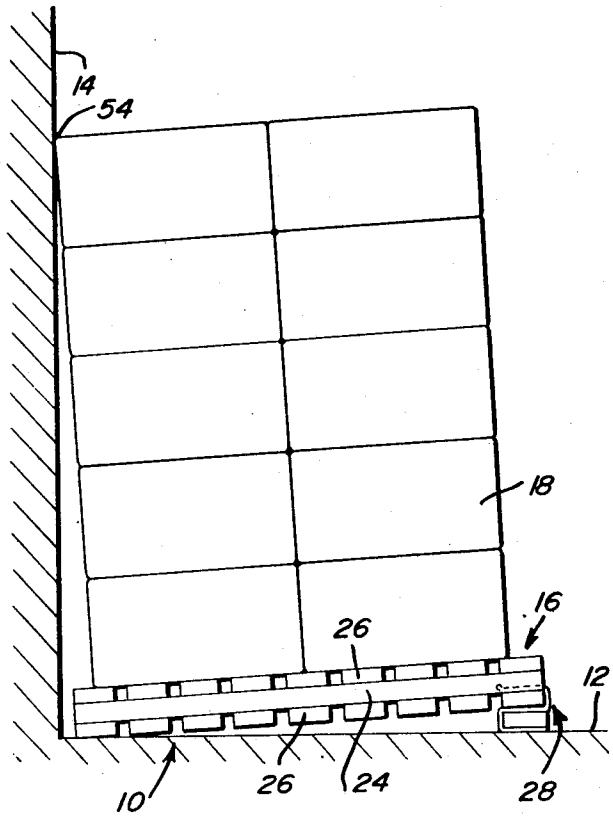


Fig . 1

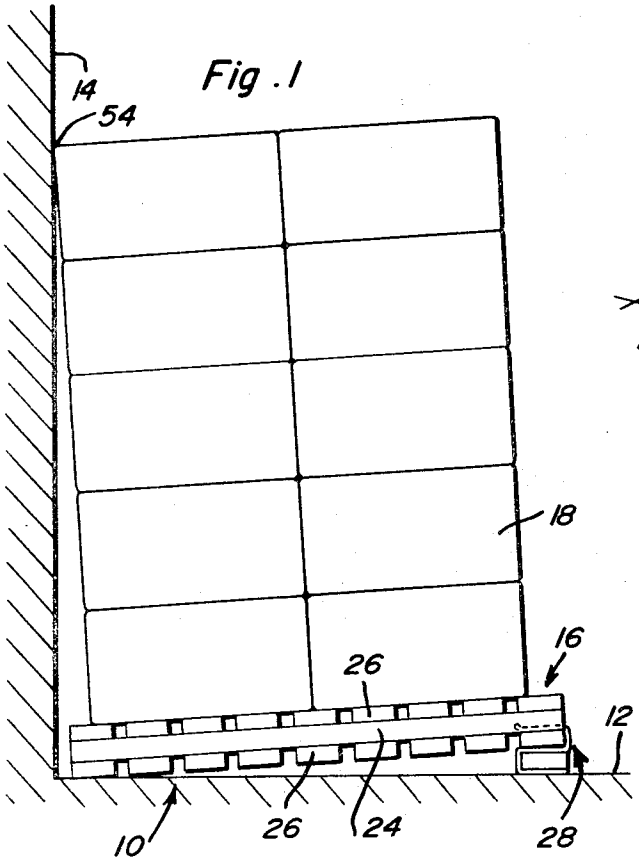


Fig . 2

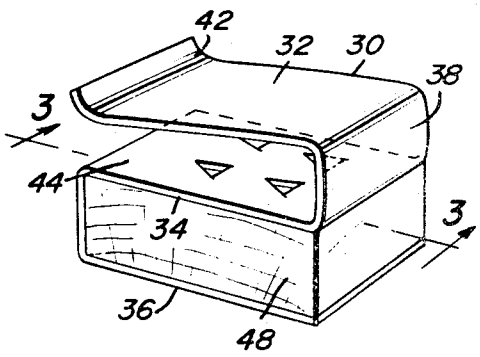


Fig . 3

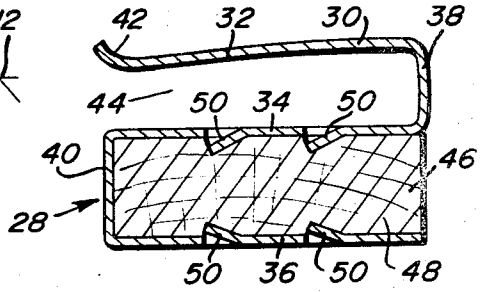


Fig . 4

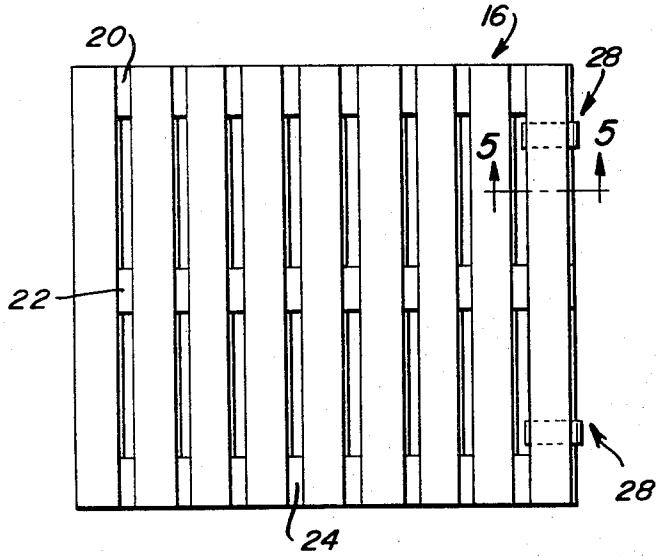
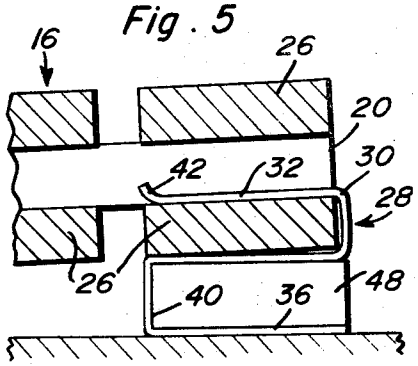


Fig . 5



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PALLET PROP

The pallet prop of the instant invention is designed to be attached to the base of a pallet by an integral spring clamp portion of the pallet prop. When a pallet is placed in a carrier for transport, the cargo loaded thereon to any appreciable height will have a tendency to sway during transit of the transport. By utilizing the spacing block or pallet prop and placing the spacer portion of the prop beneath the edge portion of a pallet remote from a wall of the transport, any load supported on the pallet is leaned against the wall of a transport and is therefore stabilized against swaying and falling while the transport is in transit. In this manner, a safer and more stable cargo may be transported with minimized or completely eliminated breakage of pallet supported loads within the transport. In addition, the pallet props are constructed in a manner whereby the integral spring clamp portion thereof may be utilized in suspending or supporting the props from a suitable elevated structural member of the transport or specific hanger provided therefor in the transport when the props are not in use.

The main object of this invention is to provide a spacing block or prop for use in conjunction with pallets and which is readily engageable and disengageable from conventional pallet constructions.

Another object of this invention, in accordance with the immediate preceding object, is to provide a spacing block or prop for use with pallets which may be readily stored when not in use.

A final object of this invention to be specifically enumerated herein is to provide a spacing block assembly or pallet block in accordance with the preceding objects and which will conform to conventional forms of manufacture, be of simple construction and easy to use so as to provide a device that will be economically feasible, long-lasting and relatively trouble-free in operation.

These together with other objects and advantages which will become subsequently apparent reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming a part hereof, wherein like numerals refer to like parts throughout, and in which:

FIG. 1 is a fragmentary vertical sectional view of a transport with a loaded pallet disposed in the transport and spacing blocks being utilized to space one marginal edge portion of the pallet above the floor of the transport in order that the portion of the load supported from the opposite marginal edge portion of the pallet may be leaned against an adjacent wall of the transport;

FIG. 2 is an enlarged perspective view of the pallet prop;

FIG. 3 is a vertical sectional view taken substantially upon the plane indicated by section line 3—3 of FIG. 2;

FIG. 4 is a top plan view of the pallet illustrated in FIG. 1 without the load supported thereon; and

FIG. 5 is an enlarged fragmentary vertical sectional view taken substantially upon the plane indicated by the section line 5—5 of FIG. 4.

Referring now more specifically to the drawings, the numeral 10 generally designates any conventional transport vehicle including a floor 12 and an upstanding wall 14 projecting upwardly from one marginal edge portion of the floor 12. A pallet generally referred

to by the reference numeral 16 is disposed within the transport 10 and has a plurality of stacks of load containers 18 disposed thereon. The pallet 16 includes three transversely spaced longitudinal members 20, 22 and 24 and upper and lower pairs of longitudinally spaced transversely extending members 26.

As may be seen from a comparison of FIGS. 4 and 5 of the drawings the transverse members 26 are evenly spaced longitudinally of the pallet 16 and the longitudinal members 20, 22 and 24 are sandwiched between the upper and lower sets of transverse members 26. Further, the transverse members 26 may be secured to the upper and lower surfaces of the longitudinal members 20, 22 and 24 in any convenient manner and thus the pallet 16 may be considered as conventional in design.

The pallet prop of the instant invention is referred to in general by the reference numeral 28 and includes a strap 30 of stiff but resilient material bent into S-shaped form so as to define three vertically spaced generally horizontal flanges 32, 34 and 36 with corresponding ends of the flanges 32 and 34 joined by means of an integral vertical strap portion 38 and corresponding opposite ends of the flanges 34 and 36 joined by means of a second integral vertical flange 40.

The ends of the flanges 32 and 34 remote from the vertical flange portion 38 are slightly convergent and the free end portion of the flange 32 is curved upwardly as at 42 whereby a clamp throat or recess 44 is defined between the flanges 32 and 34. In addition, a second recess 46 is defined between the flanges 34 and 36 and a wood spacer block 48 is snugly received in the recess 46 between the flanges 34 and 36. In addition, the flanges 34 and 36 each include triangular tongue portions 50 struck therefrom and deflected inwardly of the recess 46 at their free ends so that their free ends are embedded in the block 48 after insertion of the latter within the recess 46 whereby removal of the block 48 from the recess 46 is prevented without first spreading the flanges 34 and 36 apart from the ends thereof remote from the vertical flange portion 40.

From FIGS. 4 and 5 of the drawings it may be seen that the lower transverse member 26 extending along the marginal edge portion of the pallet 16 remote from the walls 14 has a pair of a pallet props engaged therewith with longitudinally spaced portions of that transverse member 26 clampingly engaged between the flanges 30 and 34 of the corresponding pallet props 28. Accordingly, the marginal edge portion of the pallet 16 remote from the wall 14 is elevated above the floor 12 with the result that the pallet 16 is inclined toward the wall 14 thus also inclining the stacks of containers 18 toward the wall 14 for engagement with the latter as at 54. The engagement of the containers 18 with the wall 14 at the upper end of the stack of containers remote from the prop 28 as well as the inherent frictional engagement of adjacent containers 18 serves to stabilize the load of containers 18 on the pallet prop 16 and most certainly tends to prevent swaying of the load on the pallet 16 defined by the stack of containers 18.

Although the pallet prop 28 has been illustrated and described herein as being constructed of the strap 30 and the block 48, it is to be noted that the pallet prop 28 could assume other forms. The strap 30 may be constructed of metal or suitable plastic and the block 48

may be of wood or also constructed of plastic. In addition, the entire prop **28** may be constructed of suitable plastic with that portion of such an all plastic prop corresponding to the block **48** and also the flanges **34**, **36** and **40** being constructed of one single piece of plastic. In such an embodiment, the portions of such an all plastic prop representing the flanges **34**, **36** and **40** as well as the block **48** could be in the form of a rectangular tubing member including internal bracing and the flanges **32** and **38** could be formed as integral portions of such a one-piece tubing member, whereby the entire pallet prop could be constructed of plastic and very economically produced by molding processes.

The foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly all suitable modifications and equivalents may be resorted to, falling within the scope of the invention as claimed.

What is claimed as new is as follows:

1. In combination with a generally horizontal load pallet of the type including horizontal, laterally spaced longitudinal members interconnected by upper and lower set of horizontal, longitudinally spaced and transversely extending transverse members overlying and underlying said longitudinal members and rigidly secured to the latter, a pair of spacing block assemblies carried by portions of the transverse member of said pallet at one end thereof intermediate adjacent longitudinal members of said pallet, said spacing block assemblies each including a lower spacing block defining portion and an upper horizontally opening spring clip portion defined by a first flange projecting upwardly from one marginal edge portion of the spacing block defining portion and terminating at its upper end in a horizontally directed second flange, said second flange extending toward the opposite marginal edge portion of the spacing block portion and overlying the upper surface of the lower spacing block defining portion in spaced relation relative thereto, the first and second flanges being constructed of stiff but resilient material and defining, in combination with the upper surface of the lower spacing block defining portion, a horizontally opening throat recess in which said portions of said transverse member at one end of said pallet are clampingly engaged with the lower spacing block defining portions of said spacing block assemblies underlying said portions of the last mentioned transverse member so as to space the latter above, and thus tilt the pallet relative to, a horizontal surface upon which the pallet is disposed, said spacing block assemblies each including a one-piece strap member constructed of stiff resilient material, said strap member being bent in S-shape form so as to define three vertically spaced generally horizontal flange portions with the upper and intermediate flange portions interconnected at one corresponding pair of edge portions thereof by means of a first upstanding integral flange portion extending therebetween and the remote marginal edge portions of the intermediate and lowermost flange portions interconnected by means of a second integral vertical flange portion extending therebetween, and a rigid spacing block clampingly engaged between said intermediate flange portion and said lowermost flange portion, said intermediate and the lowermost flange portion and said rigid block defining said lower spacing block portion of said assembly, said first and second flanges comprising said first flange portion and the said upper flange portion, respectively.

2. The combination of claim **1**, wherein the free edge portion of the second flange is curved upwardly and the free end portion of the second flange converges slightly toward the upper surface of the lower spacing block defining portion.

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