May 28, 1963 R. W. KENYON ETAL 3,091,195

PALLET SUPERSTRUCTURE

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Fig. 1

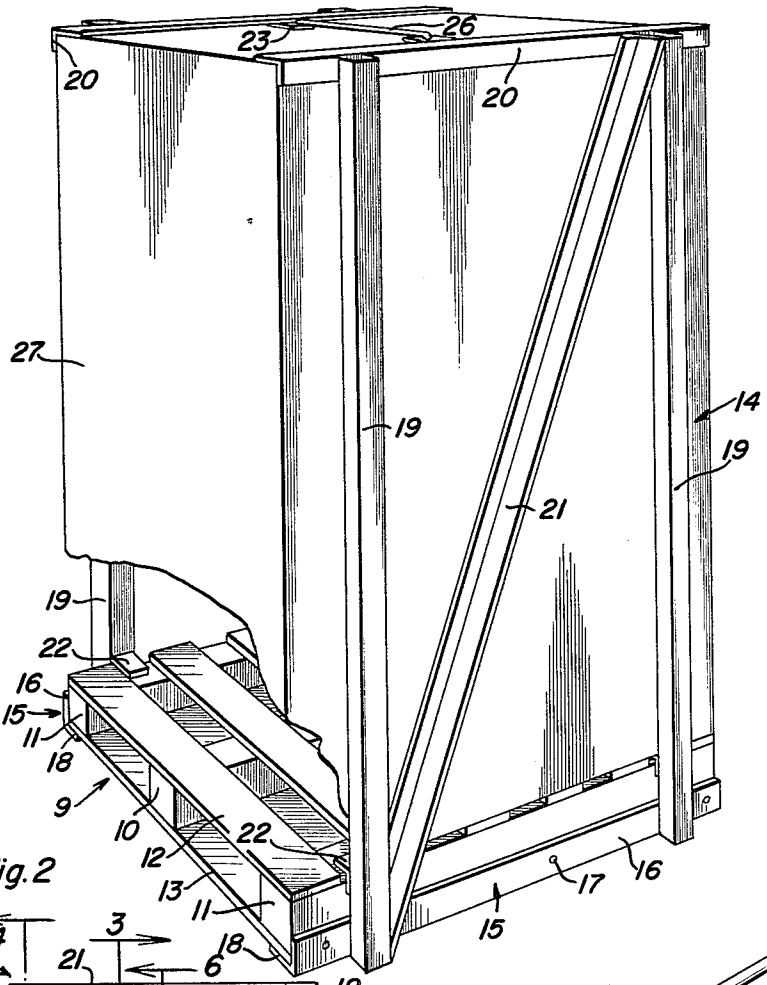


Fig. 2

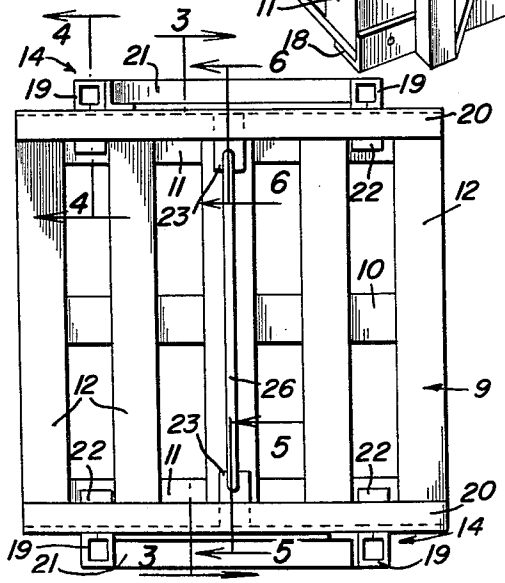
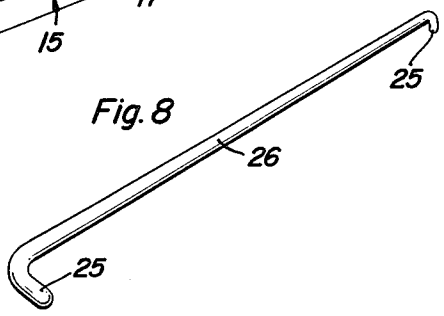


Fig. 8



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Fig. 3

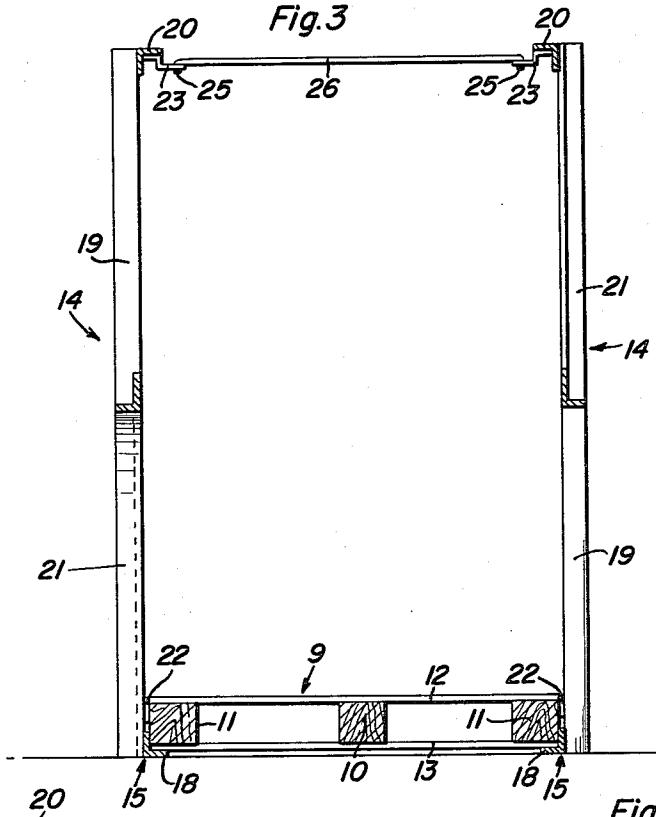


Fig. 7

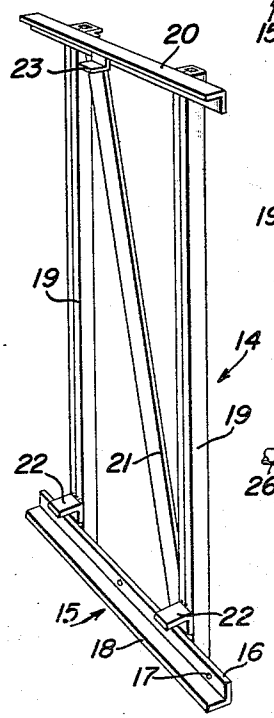


Fig. 5

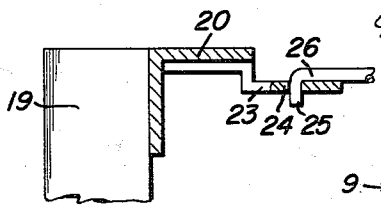


Fig. 4

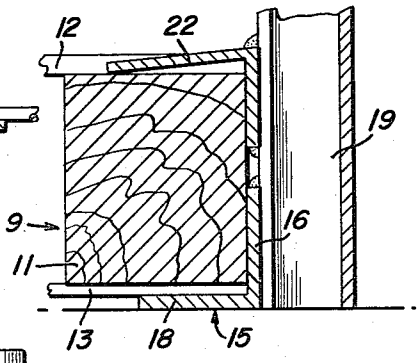
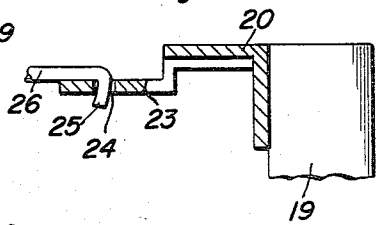


Fig. 6



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3,091,195
PALLET SUPERSTRUCTURE

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2 Claims. (Cl. 108—53)

This invention relates to new and useful improvements in pallet superstructures and has for its primary object to provide, in a manner as hereinafter set forth, novel means whereby a plurality of pallets, loaded with soft-packaged products, may be stacked or tiered with safety.

Another very important object of the present invention is to provide an improved superstructure of the aforementioned character which may be expeditiously secured for use on a conventional wooden pallet without altering or modifying same structurally.

Still another important object of the invention is to provide a superstructure of the character described which will permit the entire top of the pallet to be utilized for receiving the load.

Other objects of the invention are to provide a pallet superstructure of the character set forth which will be comparatively simple in construction, strong, durable, compact, of light weight and which may be manufactured at low cost.

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:

FIGURE 1 is a perspective view, showing an improved superstructure embodying the present invention mounted on a loaded pallet;

FIGURE 2 is a view in top plan;

FIGURE 3 is a vertical sectional view, taken substantially on the line 3—3 of FIGURE 2;

FIGURE 4 is a fragmentary view in vertical section through the lower portion of the device and on an enlarged scale, taken substantially on the line 4—4 of FIGURE 2;

FIGURE 5 is a fragmentary view in vertical section on an enlarged scale through an upper portion of the device, taken substantially on the line 5—5 of FIGURE 2;

FIGURE 6 is a fragmentary view in vertical section on an enlarged scale through another upper portion of the device, taken substantially on the line 6—6 of FIGURE 2;

FIGURE 7 is a perspective view of one of the frame units; and

FIGURE 8 is a detail view in perspective of the removable tie rod.

Referring now to the drawing in detail, it will be seen that reference numeral **9** designates generally a conventional wooden pallet of suitable dimensions. The pallet **9** includes the usual intermediate and outer stringers **10** and **11**, respectively, mounted between transverse deck boards **12** and bottom boards **13**.

The embodiment of the present invention which has been illustrated comprises a pair of duplicate side frames of suitable metal which are designated generally by reference numeral **14**. The side frames **14** include base bars **15** of angle iron which are secured longitudinally on the lower portions of the sides of the pallet **9**. The vertical legs or flanges **16** of the angle bars **15** are apertured, as indicated at **17**, to accommodate nails for securing said bars on the stringers **11** of the pallet **9**. The horizontal legs **18** of the angle bars **15** are engaged beneath the side portions of the pallet **9**.

The frames **14** further include tubular square posts **19** having their lower end portions welded or otherwise suitably affixed to the bars **15** adjacent the ends thereof. Affixed horizontally to the upper end portions of the posts **19** are top bars or rails **20** of angle iron which parallel the bars **15**. Inclined braces **21** of angle iron extend between the members **15** and **20**.

Affixed to the lower portions of the posts **19**, adjacent to but spaced from the bars **15**, are angle brackets **22**. The brackets **22** rest on the stringers **11** of the pallet **9** between the adjacent deck boards **12**. As shown to advantage in FIGURE 4 of the drawing, the brackets **22** are inwardly and downwardly inclined.

Affixed to the inner sides of the top bars or rails **20**, at an intermediate point, are downwardly offset lugs or ears **23** of suitable metal. The ears **23** are apertured, as indicated at **24**, for receiving the downturned hooks **25** on the ends of a removable transverse tie rod **26**.

It is thought that the use of the superstructure will be readily apparent from a consideration of the foregoing. The load on the pallet is indicated at **27**. Briefly, to install the device on the loaded pallet **9**, the bars **15** are engaged longitudinally with the lower longitudinal side portions of said pallet with the brackets **22** engaged with the tops of the side stringers **11** between the adjacent deck boards **12**. Nails are then driven into the stringers **11** through the apertures **17** for securing the units **14** on the pallet. The tie rod **26** is then connected to the ears **23**. It will thus be seen that the loaded pallets may be transported to a storage warehouse where the superstructure may be installed, if needed. Or, if desired, the superstructure may be installed before the pallet is loaded. The construction and arrangement, it will be observed, is such that the entire top surface of the pallet is free and unobstructed to receive the load. When the loaded pallets are stacked or tiered as, for example, for temporary storage the base bars **15** on the upper pallets rest longitudinally on the rails **20** on the lower pallet. Most of the weight of the load is transmitted to the stringers **11** through the angle brackets **22** resting thereon. As the loaded pallets are stacked, the weight causes the angle iron bracing to tighten and stabilize the superstructure. Of course, the tie rod **26** prevents the upper end of the frames **14** from spreading in an obvious manner. The frames or units **14** are interchangeable and, if desired, may be mounted on the front and rear of the pallet **9** rather than on the sides thereof.

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. For example, the braces **21** may be eliminated, if desired.

What is claimed as new is as follows:

1. A container comprising a pallet forming the base of the container, a pair of parallel side frames overlapping and connected to opposite sides of the pallet, said pallet including a pair of longitudinally extending spaced stringers which are rectangular in cross section and connected by spaced transversely extending deck boards on top of the stringers, said deck boards having the outer ends thereof terminating flush with the outer edges of the stringers, each side frame including a member L-shaped in cross section extending substantially the entire length of one of said stringers and surrounding its lower outer corner whereby the one stringer is positioned on top of the L-member, a pair of spaced vertical posts secured to the outer side of said L-member, each post being orientated so as to correspond with a space between a pair of adjacent spaced deck boards, a flat laterally extending projection on each post slightly narrower than said

space and projecting into said space to overlap said one stringer, means connecting the upper ends of the posts together, said means being adapted to receive superimposed loads, and means extending between and releasably connecting the upper ends of the side frames.

2. The structure of claim 1 wherein said flat projection is inwardly and downwardly inclined at a slight angle to the horizontal.

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