

April 27, 1954

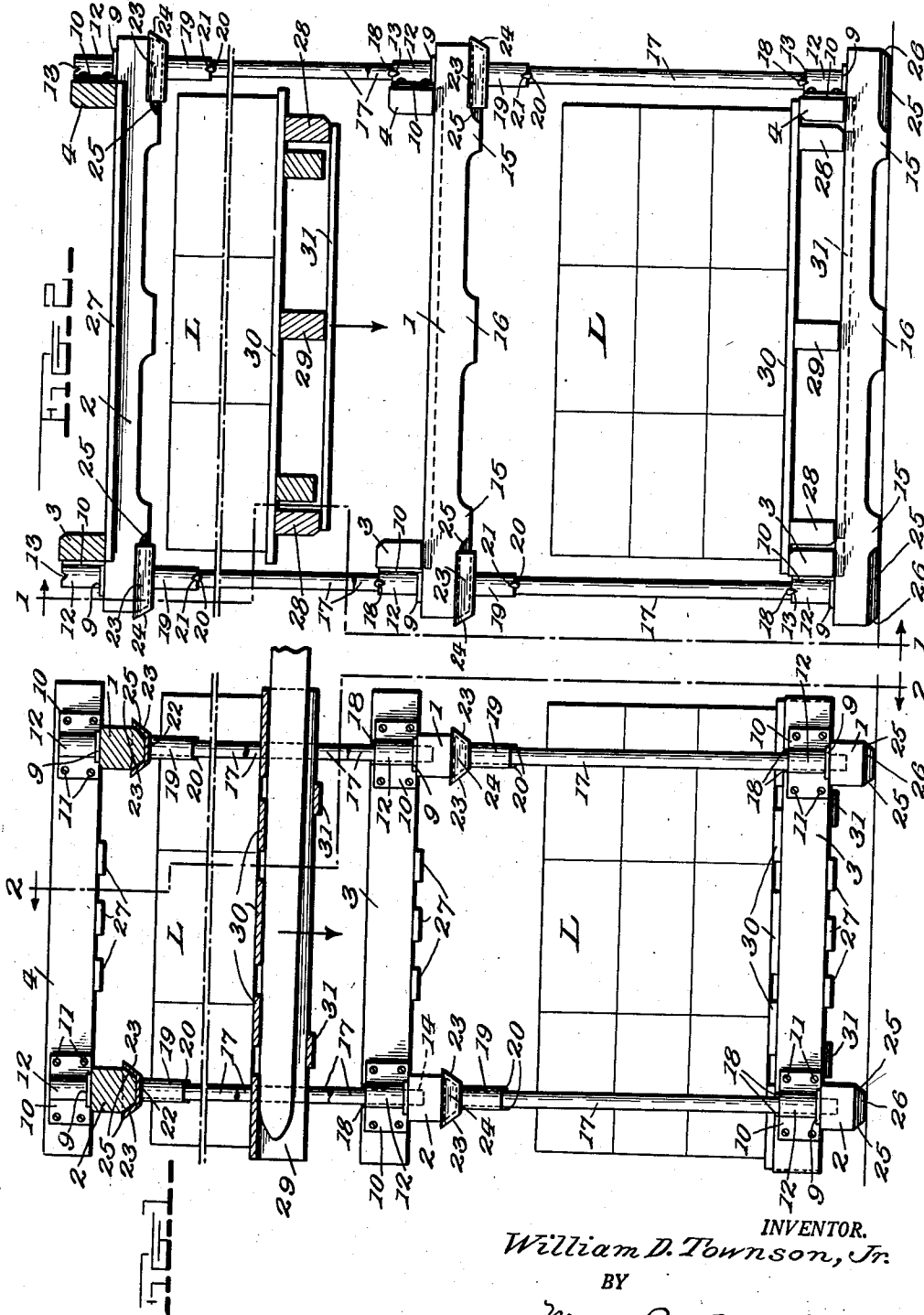
W. D. TOWNSON, JR

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SECTIONAL STORAGE RACK AND PALLETS THEREFOR

Filed Dec. 2, 1952

2 Sheets-Sheet 1



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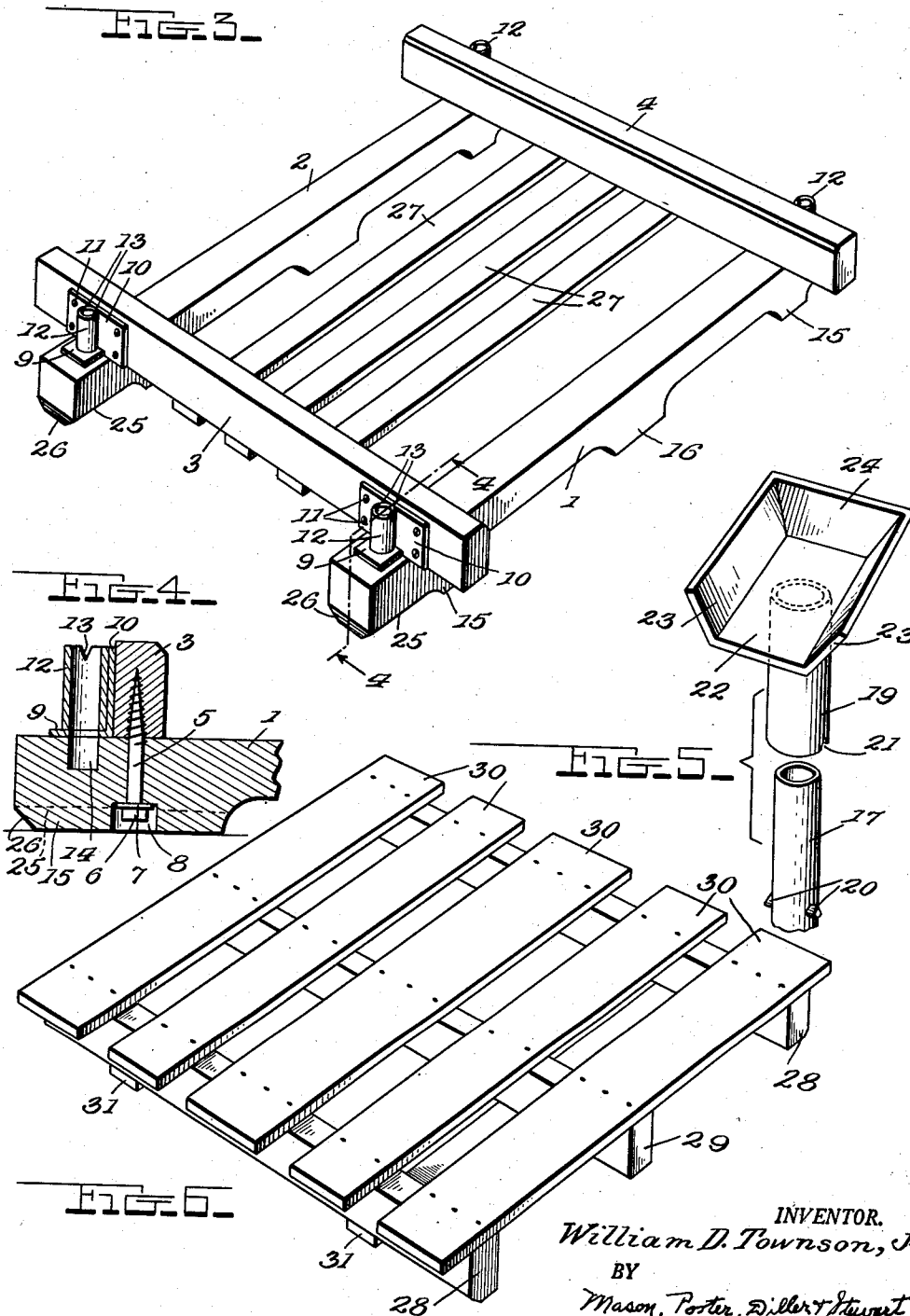
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UNITED STATES PATENT OFFICE

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SECTIONAL STORAGE RACK AND PALLETS
THEREFOR

William D. Townson, Jr., Murphy, N. C.

Application December 2, 1952, Serial No. 323,543

3 Claims. (Cl. 248-120)

1 The invention relates to new and useful improvements in a sectional storage rack and pallets therefor.

An object of the invention is to provide a storage rack for pallets loaded with merchandise, which is formed in sections built one on another, and wherein the pallets may be placed in or removed from any one of the sections by the aid of a lift truck.

A further object of the invention is to provide a storage rack and pallets of the above type wherein the sections may be easily disassembled when not in use.

These and other objects will in part be obvious and will in part be hereinafter more fully disclosed.

In the drawings, which show by way of illustration one embodiment of the invention:

Figure 1 is a view partly in side elevation and partly in section on the line 1-1 of Figure 2.

Figure 2 is a view partly in end elevation and partly in section on the line 2-2 of Figure 1.

Figure 3 is a perspective view of the base portion of one of the storage rack sections.

Figure 4 is a sectional view on the line 4-4 of Figure 3.

Figure 5 is a perspective view showing the upper portions of one of the posts and a supporting cap carried thereby on which caps the base portion and posts of an upper section are supported, and

Figure 6 is a perspective view of one of the pallets used in a section of the storage rack.

The invention has to do with a storage rack made up of sections or units which can be built and supported one on another and which can be easily disassembled when not in use. Associated with the portable rack are pallets which can be lifted by the tynes of a lift truck and placed in or removed from a section of the storage rack. These pallets which are placed in the storage section are held from lateral movement and also from endwise movement.

Referring more in detail to the illustrated embodiment of the invention, the supporting base of each unit includes cross bars 1 and 2 which are parallel with each other and extend from one side of the storage rack to the other. Mounted on these cross bars are side bars 3 and 4. These side bars are parallel to each other and are secured to the cross bars 1 and 2 respectively by bolts, one of which is shown at 5 in Figure 4. The bolt has a square head 6 bearing on a washer 7 and the head of the bolt is set in a recess 8 so as not to interfere with the supporting of the

2 section by contact with the cross bars 1 and 2. The side bars are disposed on the cross bars a slight distance back from the ends thereof and likewise the cross bars are connected to the side bars at a short distance back from the ends thereof.

Mounted on the extended end portion of the cross bar 1 is a horizontal plate 9 formed integral with a plate 10 which contacts with the outer side face of the side bar 3. This plate 10 is secured to the side bar by suitable screws indicated at 11. Mounted on this horizontal plate 9 is a cylindrical member 12 which is preferably welded to the plate. In the upper end of this member 12 are diametrically disposed notches 13. The plate 9 has an opening therethrough of the same diameter as the inner diameter of the cylindrical member 12. There is a recess 14 formed in the cross bar 1 of the same diameter and in alignment with the tubular member 12. There is a similar tubular member 12 at each corner of the supporting base and likewise a similar horizontal plate 9 and a plate 10 which is secured to the outer face of the side members 3 and 4 respectively.

Each cross bar of the base has supporting feet 15 and also a central foot 16 on which the first unit of the storage rack is supported.

A tubular post 17 is inserted in each tubular member 12 and the post has projecting lugs 18 which engage the V-notches 13 and this prevents the post from rotation in the tubular member 12. On the upper end of the post 17 is the supporting bracket for the next section or unit of the storage rack. This bracket includes a tubular member 19 which telescopes over the upper end of the post and there are lugs 20 on the post 17 which engage V-notches 21 in the tubular member 19. The bracket also includes a cap plate having a horizontal supporting portion 22 with outwardly inclined side walls 23, 23 and an end wall 24.

There are four of these posts with similar brackets at the upper ends thereof. The cross bar 1 has tapered side walls 25 on the lower face thereof and also a tapered end wall 26. The cross bar rests on the plate 22 and is held from endwise movement by the end walls and side-wise movement by the side walls 23. There is a supporting post at each corner similar to the one just described and a bracket member at the upper end thereof so that the supporting base of an upper section or unit can be placed on these cap plates of the unit just beneath and thus the storage rack may be built up to any

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convenient height. A section or unit may be lifted as a whole by the tynes of a lift truck and likewise the section or unit may be assembled and then placed on the supporting brackets of another unit section.

Each supporting base has cross bars 27 which are parallel with the cross bars 1 and 2. They are of much less thickness than the cross bars 1 and 2 so that the tynes of a lift truck can be inserted through the spaces between the feet 15 and 16 for lifting the base and storage section as a unit.

While any usual form of pallet may be placed in a section of the storage rack it is preferable to provide a pallet which is properly dimensioned and constructed so that when placed in the storage section it will be held from lateral or endwise movement.

In Figure 6, there is shown the improved pallet which includes side members 28, 28 which are dimensioned and positioned so that they contact the side members 3 and 4 of the supporting base with a free sliding contact. There is also a central member 29 which extends parallel with the side members 28. Floor boards 30, 30 are extended across from one side member 28 to the other side member of the pallet and is secured to the said side members and also a central member 29. The ends of the floor boards project beyond the side members 28, 28 and overlap and may rest on the side bars 3 and 4 of the supporting base. There are two cross bars 31 which are attached to the undersides of the side members of the pallet and are disposed so that when the pallet is placed on a supporting base the side bars will lie close to the inner faces of the cross bars 1 and 2. The purpose of these cross bars 31 is to prevent the pallet, when placed on a supporting base, from movement in an endwise direction. The side members 28, 28 of the pallet contact the side bars 3 and 4 of the base and this will prevent any lateral movement of the pallet. The side members are of sufficient depth so that the tynes of a lift truck may be readily inserted beneath the floor boards of the pallet and the pallet lifted and removed from the section of the storage rack.

In like manner the pallet with a load of merchandise indicated diagrammatically at L may be placed on the pallet and then the pallet placed in one of the storage units or sections by the lift truck.

It is obvious that many changes in the details of construction may be made without departing from the spirit of the invention as set forth in the appended claims.

I claim:

1. A sectional storage rack and pallets therefor comprising a plurality of superposed identical sections, each containing a supporting base having spaced parallel side bars and spaced parallel cross bars underlying said side bars adjacent the end thereof and rigidly secured thereto, said cross bars projecting beyond said side bars posts attached to said supporting base at the corners thereof and extending upwardly therefrom on which the supporting base of another section may be supported and said posts being disposed on said projecting end portions of the cross bars

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and at the outer side of said side bars whereby said side bars are free to slidably receive a pallet having longitudinal side bars disposed between and freely engaging the side bars of the supporting base, and platform members secured to the side bars of the pallet and extending over and slidably engaging the side bars of the supporting base.

2. A sectional storage rack and pallets therefor comprising a plurality of superposed identical sections, each containing a supporting base having spaced parallel side bars and spaced parallel cross bars underlying said side bars adjacent the end thereof and rigidly secured thereto, said cross bars projecting beyond said side bars posts attached to said supporting base at the corners thereof and extending upwardly therefrom on which the supporting base of another section may be supported and said posts being disposed on said projecting end portions of the cross bars and at the outer side of said side bars whereby said side bars are free to slidably receive a pallet having longitudinal side bars disposed between and freely engaging the side bars of the supporting base, and platform members secured to the side bars of the pallet and extending over and slidably engaging the side bars of the supporting base, which pallet is provided with means for holding said pallet from endwise and lateral movement while in engagement with the supporting base.

3. A sectional storage rack comprising a plurality of superposed identical sections each containing a supporting base having spaced parallel side bars and spaced parallel cross bars underlying said side bars adjacent the ends thereof and rigidly secured thereto, said cross bars projecting beyond said side bars tubular members disposed on said projecting end portions of the cross bars and adjacent the outer faces of said side bars, posts mounted in said tubular members, means for holding the posts from rotation, a supporting bracket at the upper end of each post, said supporting bracket including a tubular member telescoped onto the upper end of each post, means for preventing said tubular member from turning on the post, each bracket including a horizontal member, side members and an end member mounted on the upper end of said tubular member and forming a support for the cross members of another supporting base, said side members and said end members of the bracket serving to prevent the supporting base from moving endwise or laterally, each section being adapted to receive and support a pallet slidably engaging said side bars.

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