Nov. 30, 1954 C. C. AVERILL 2,695,724

CRATE SUITABLE FOR PALLETS, SKIDS OR THE LIKE

Filed Feb. 19, 1951 2 Sheets-Sheet 1

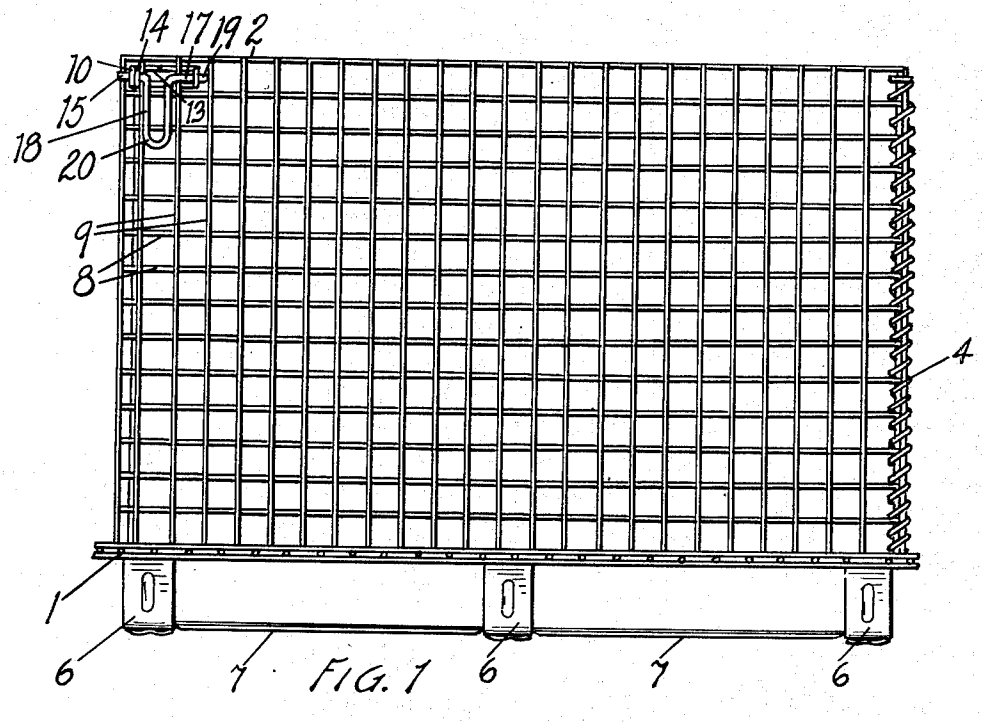


FIG. 1

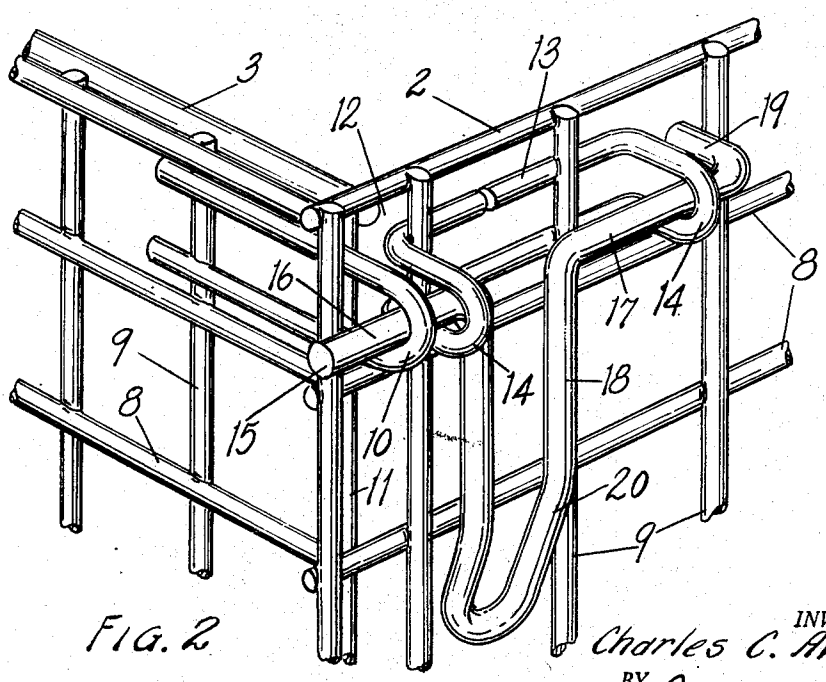


FIG. 2

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CRATE SUITABLE FOR PALLETS, SKIDS OR THE LIKE

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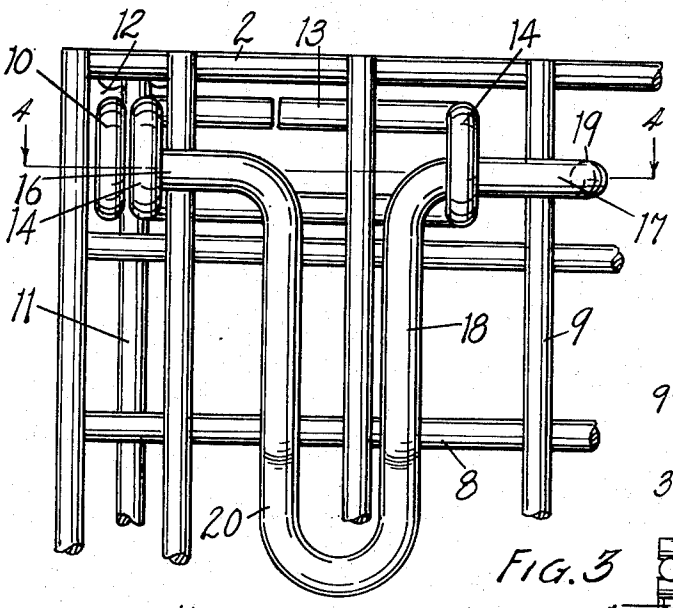


FIG. 3

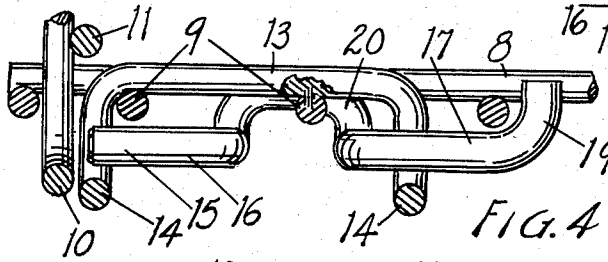


FIG. 4

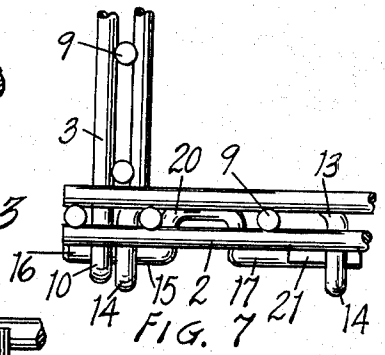


FIG. 7

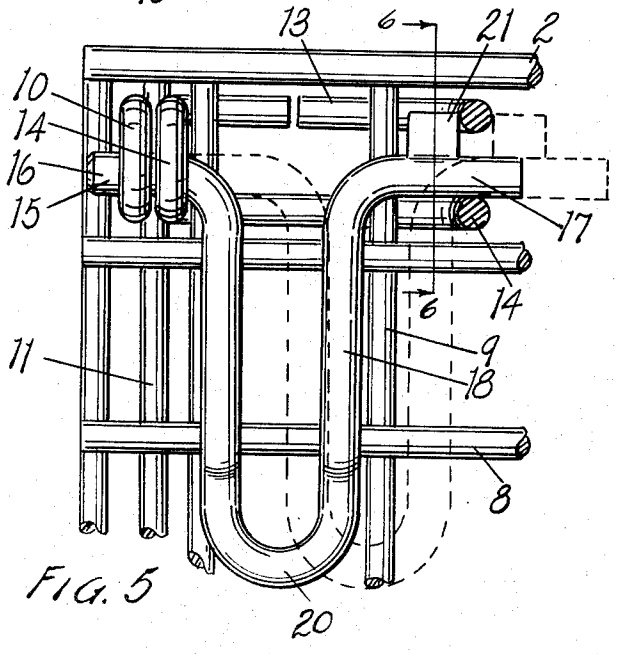


FIG. 5

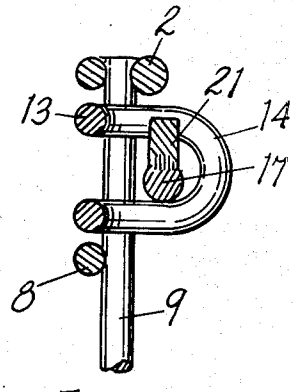


FIG. 6

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CRATE SUITABLE FOR PALLETS, SKIDS, OR THE LIKE

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Application February 19, 1951, Serial No. 211,755

5 Claims. (Cl. 220—7)

This invention relates to improvements in crates suitable for pallets, skids or the like.

The main objects of this invention are:

First, to provide a crate suitable for pallets, skids or the like having the walls which are swingably associated having means for securely locking the walls in erected position, which means may be easily operated for locking or unlocking.

Second, to provide a structure having these advantages in which the locking bolt may be secured either in locked or retracted position with the handle of the bolt in depending position at the side of one wall and acting by gravity to retain the bolt in either position.

Third, to provide a structure having these advantages which is economical to produce and is easily operated.

Objects relating to details and economies of the invention will appear from the description to follow. The invention is pointed out in the claims.

A preferred embodiment of the invention is illustrated in the accompanying drawings, in which:

Fig. 1 is a side elevational view of a walled pallet embodying my invention.

Fig. 2 is an enlarged perspective view showing the adjacent walls in locked position.

Fig. 3 is a fragmentary side elevational view with the bolt in retracted position.

Fig. 4 is a fragmentary view partially in section on a line corresponding to line 4—4 of Fig. 3.

Fig. 5 is a fragmentary side elevational view of a modified form or embodiment of my invention, the bolt being shown in locked position by full lines and in unlocked or retracted position by dotted lines.

Fig. 6 is a fragmentary view in section on a line corresponding to line 6—6 of Fig. 5.

Fig. 7 is a fragmentary plan view further illustrating the relationship of the walls of the crate.

I have illustrated my invention as embodied in a pallet comprising the grid-like deck 1 which constitutes the bottom for the crate, the side walls 2 and 3 being hingedly connected in pairs by means of the spiral hinge elements 4, one wall of each pair being hingedly connected to the bottom or deck 1. The deck is provided with supporting legs 6 connected by base members 7. As these leg and base members form no part of my present invention, they are not further illustrated or described herein and it will be understood that the bottom 1 for various uses may be without legs.

The walls 2 and 3 are formed of spaced horizontal wire or light rod slats 8 and spaced vertical wire or light rod slats 9, the slats being welded at their crossing points. The wall 3 is provided with a loop-like keeper 10 projecting from its swingable end 11 and adapted to be disposed through an opening 12 defined by vertical and horizontal slats of the wall 2. The wall 2 is provided with a bolt support 13 which is formed of a loop of wire or light rod looped at both ends, the bights being disposed angularly outward to provide spaced bolt receiving eyes 14. The support is welded on the inner sides of an adjacent pair of vertical slats on the wall 2. These eyes are aligned with the keeper 10 when it is passed through the opening 12 as illustrated in Fig. 2.

The bolt 15 is slidably and rotatably supported by the eyes 14 and is desirably formed of a heavy wire or light rod conformed to provide the keeper engaging front portion 16 and the rear portion 17 and an intermediate loop-like handle 18. The front and rear portions 17 are of such length that the bolt may be shifted longitudinally

to disengaged position as shown in Figs. 3 and 4 or may be shifted to engaged position as shown in Fig. 2. The rear end of the bolt is turned laterally to provide a stop 19 which is disposed at an angle to the handle. The stop coacts with an adjacent vertical slat either to hold the bolt in engaged position as shown in Figs. 1 and 2 with the handle depending at the side of the wall or in retracted position as shown in Figs. 3 and 4. The weight of the handle serves to swing the bolt to stop engaging position, manual manipulation being required to shift the bolt longitudinally either to engaging or disengaging position. The lower end of the handle is preferably bent inwardly at 20 so that when the bolt is in engaged position, the end of the handle lies between a pair of adjacent vertical slats and is not likely to be engaged by some exterior object in the handling of the crate. If desired, the handle may be locked as by means of a padlock to one of the slats of the wall carrying the handle.

In the modification shown in Figs. 5 and 6, parts are the same as described with the exception that the stop 21 on the bolt is a separate part welded thereto instead of being formed integrally with the bolt as in the structure previously described. In this modified structure, the stop 21 coacts with the rear bolt supporting eye 14 of the support 13 to hold the bolt either in its locked position or in its retracted position as is shown by full and dotted lines in Fig. 5.

By forming the bolt member of rod stock and with the loop-like handle, it is springable to a substantial degree and is not likely to be damaged by sharp or severe blows such as might result from contact with similar structures, post parts of buildings or ships or other relatively fixed object. A further advantage is that should the bolt element be damaged, it can be replaced in the field without the use of tools or equipment other than those commonly found in the kit of a mechanic as the damaged bolt can be removed by compressing the loop forming the handle and withdrawing the bolt.

I have illustrated and described my invention in a highly practical form or embodiment thereof. As stated, my invention is well adapted for embodiment in crates for pallets, skids and the like and I have illustrated the same in that relationship. I have not attempted to illustrate or describe other embodiments or adaptations as it is believed that this disclosure will enable those skilled in the art to embody or adapt my invention as may be desired.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:

1. In a crate, the combination of a bottom, side walls at least one of which comprises spaced horizontal and vertical slats, an adjacent wall having a loop-like keeper projecting from the end thereof to be disposed through an opening in said slatted wall, a bolt support having outwardly projecting looped ends disposed on the inner side of adjacent vertical slats with its looped ends projecting outwardly of the slats to which it is secured providing bolt receiving eyes aligned with the keeper when the walls are in erected position, a bolt having front and rear portions slidably and swingably engaging said eyes of said bolt support, and an intermediate loop-like offset constituting a handle, the rear end of the rear portion of the bolt being turned laterally at an angle to the handle providing a stop coacting with a vertical wall slat to hold the bolt either in its projected keeper engaging position or with the bolt in retracted position when the handle is in a depending position against said slatted wall, said stop being released from said vertical wall slat for sliding the bolt in the bolt receiving eyes when the handle is tilted upwardly away from the slatted wall.

2. In a crate, the combination of a bottom, side walls at least one of which comprises spaced horizontal and vertical slats, an adjacent wall having a loop-like keeper projecting from the end thereof to be disposed through an opening in said slatted wall, a bolt support having outwardly projecting looped ends providing bolt receiving eyes aligned with the keeper when the walls are in erected position, a bolt having front and rear portions slidably and swingably engaging said eyes of said bolt support, and an intermediate loop-like offset constituting a handle, the rear end of the rear portion of the bolt being

turned laterally at an angle to the handle providing a stop coacting with a vertical wall slat to hold the bolt either in its projected keeper engaging position or with the bolt in retracted position when the handle is in a depending position against said slatted wall. said stop being released from said vertical wall slat for sliding the bolt in the bolt receiving eyes when the handle is tilted upwardly away from the slatted wall.

3. In a crate, the combination of a bottom, side walls at least one of which comprises spaced horizontal and vertical slats, an adjacent wall having a loop-like keeper projecting from the end thereof to be disposed through an opening in said slatted wall, a bolt support having outwardly projecting looped ends providing bolt receiving eyes aligned with the keeper when the walls are in erected position, a bolt having front and rear portions slidably and swingably engaging said eyes of said bolt support, and an intermediate loop-like offset constituting a handle, the rear end of the rear portion of the bolt being turned laterally at an angle to the handle providing a stop coacting with a vertical wall slat to hold the bolt either in its projected keeper engaging position or with the bolt in retracted position with the handle in depending position, the weight of the handle acting to swing it to a depending position at the side of the slatted wall to engage said stop and retain it in engaged position, the end of the loop constituting the handle being bent inwardly to project between adjacent slats when the bolt is in locked position, said stop being released from said vertical wall slat for sliding movement of the bolt in the bolt receiving eyes when the handle is tilted upwardly away from the slatted wall.

4. In a crate, the combination of a bottom, side walls at least one of which comprises spaced horizontal and vertical slats, an adjacent wall having a keeper projecting therefrom to be disposed between slats of the said slatted wall, a bolt support secured to the slats and having outwardly projecting looped ends providing bolt receiving eyes aligned with the keeper when the walls are in erected position, a bolt having front and rear portions slidably and swingably engaging said eyes of said bolt support, and a handle intermediate said front and rear portions, said handle being swingable into a depending position against

the outer side of the first mentioned wall, said rear portion of said bolt having a stop thereon disposed to coact with a wall slat for holding the bolt in its projected keeper engaging position or in its retracted position with the handle in depending position against the outer side of the first mentioned wall upon sliding and swinging movement of the bolt in the eyes of the bolt support, the weight of the handle acting to swing the bolt and retain the stop in stop engaging position relative to said wall slat.

5. In a crate, the combination of a bottom, side walls at least one of which comprises spaced horizontal and vertical slats, an adjacent wall having a keeper projecting therefrom to be disposed through an opening in the said slatted wall, a bolt support secured to the slats and having outwardly projecting looped ends providing bolt receiving eyes aligned with the keeper when the walls are in erected position, a bolt having front and rear portions slidably and swingably engaging said eyes of said bolt support, and a handle intermediate said front and rear portions, said rear portion having a stop thereon coating with the rear bolt supporting eye with the end loop of the support for holding the bolt either in its projected position or in its retracted position with the handle in depending position at the side of the wall, said stop being released from the bolt receiving eye for sliding movement of the bolt when the handle is swung upwardly from its depending position at the side of the wall.

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