Nov. 19, 1929. R. A. FONTAINE 1,736,074

TRUCK BODY

Filed Nov. 7, 1925 3 Sheets-Sheet 1

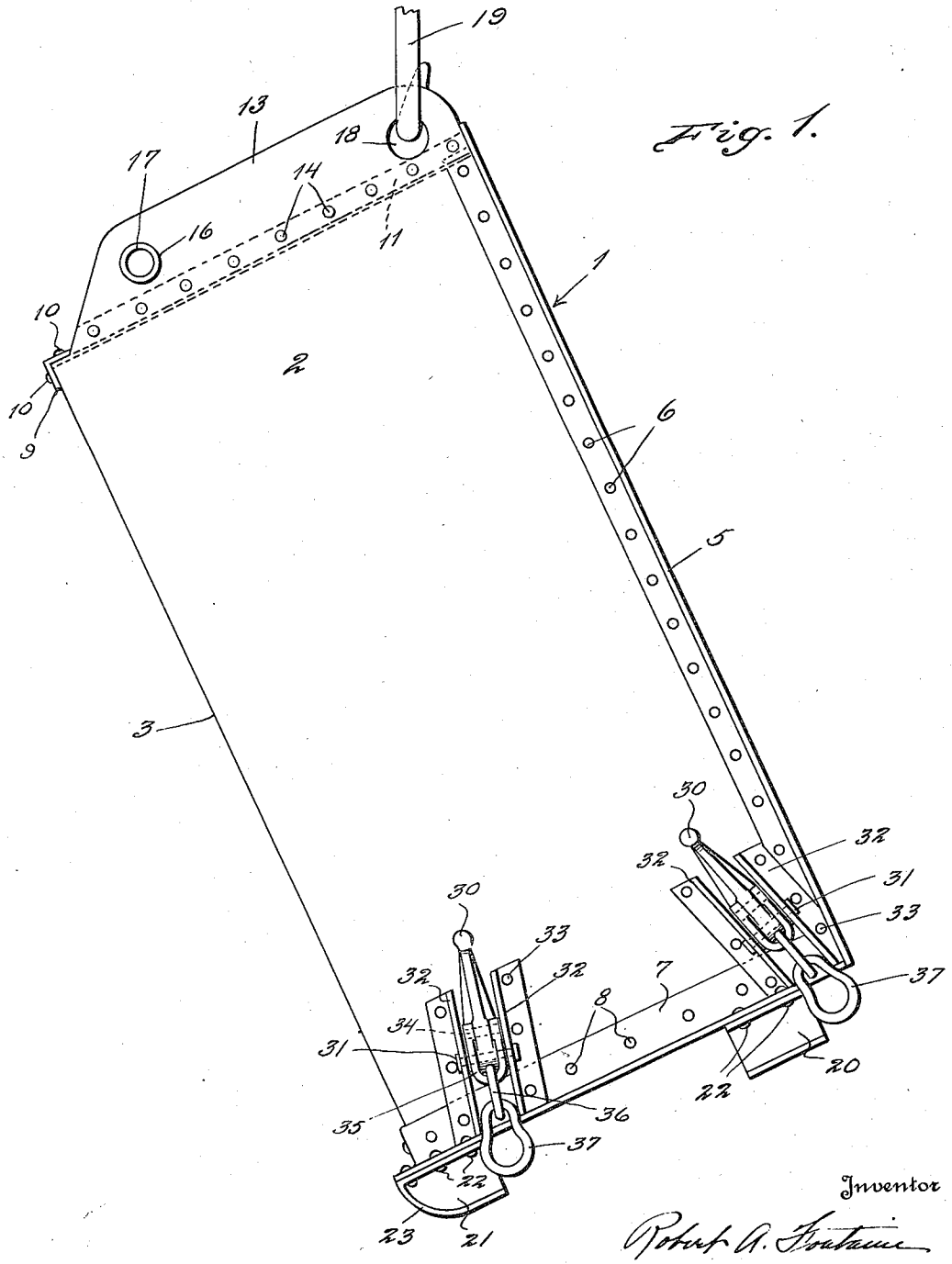


Fig. 1.

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Witness

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Filed Nov. 7, 1925 3 Sheets-Sheet 2

Fig. 2.

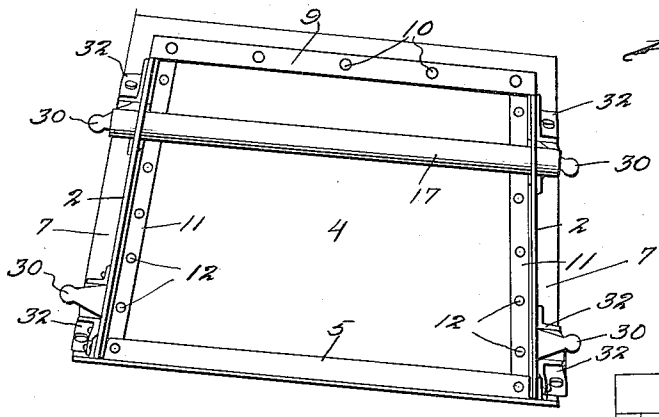
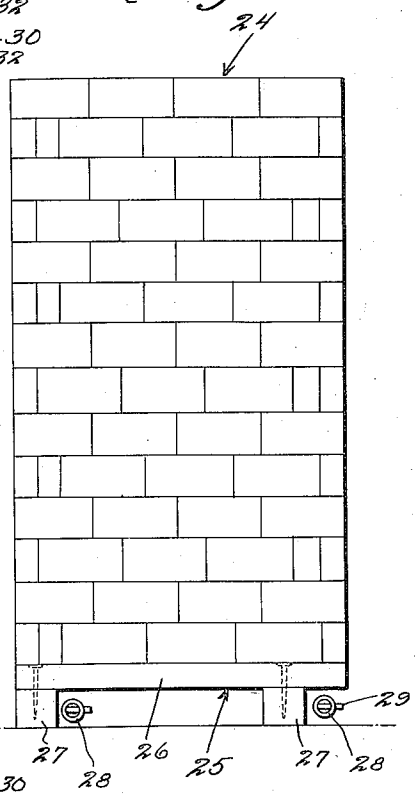


Fig. 4.



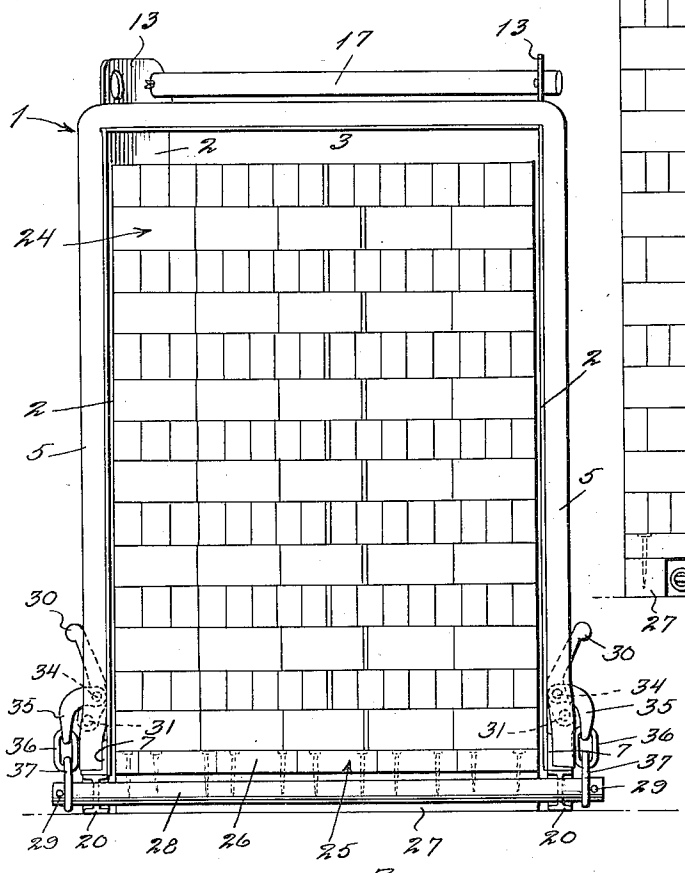


Fig. 3.

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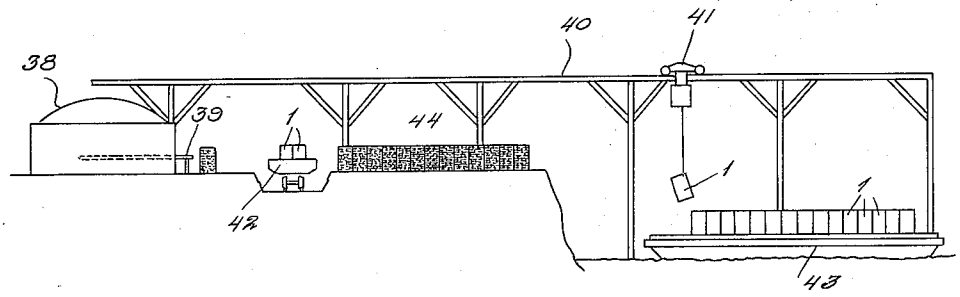
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TRUCK BODY

Filed Nov. 7, 1925 3 Sheets-Sheet 3

Fig. 5.



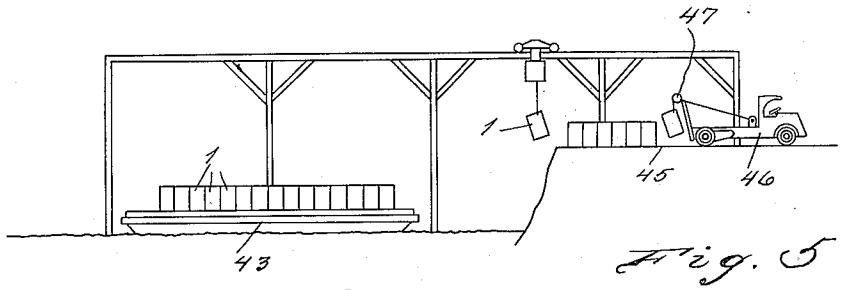


Fig. 5a.

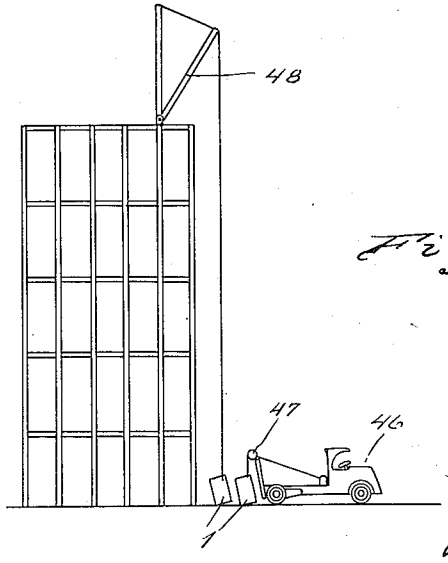


Fig. 5b.

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UNITED STATES PATENT OFFICE

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TRUCK BODY

Application filed November 7, 1925. Serial No. 67,561.

This invention relates to loading and unloading devices whereby bricks, concrete blocks or the like may be handled in quantities by means of cranes or similar hoisting devices.

The principal object of the invention, generally stated, is to provide means or a device whereby a stack or hack of bricks or similar articles may be handled while resting upon a pallet and readily hoisted or transported from place to place and deposited at the desired location without disarranging or upsetting the stack.

An important and more specific object of the invention is to provide a carrier or container so constructed and arranged as to be detachably connected or engaged with a pallet on which rests a stack of bricks or similar articles, the carrier being of such formation and embodying such structural characteristics that it will maintain the stack intact while the device is lifted about by means of a travelling or other crane or otherwise handled or transported.

A further object of the invention is to provide a carrier of such construction that when engaged with an ordinary pallet, the latter will form the bottom closure for the carrier, the carrier itself having crane hook attaching means so located that when the carrier is lifted, while carrying a stack of bricks, the center of gravity will be at such a point that the bricks will engage against the back of the carrier and be thereby held in proper stack form for storage or transportation purposes, the carrier, being, however, capable of being deposited, at the will of the operator, to bring its rear wall downwardly so that the weight of the bricks or other articles will be relieved from the pallet, thus permitting removal thereof and dumping of the carrier.

A still more specific object of the invention is the provision of a carrier embodying peculiar supporting means capable of being inserted beneath a pallet and having a very quickly and easily detachable connection with the carrier itself for facilitating and expediting the work of engaging the carrier about a stack of bricks and subsequently removing it, manually releasable tension means being also provided connected with the pallet engaging elements.

To the attainment of the foregoing and other objects and advantages, such as simplicity and cheapness in manufacture, ease of handling and a general improvement of the art, the invention preferably consists in the combination and arrangement of parts and the details of construction to be hereinafter more fully described and claimed, and illustrated in the accompanying drawings in which:

Figure 1 is a side elevation of the carrier,

Figure 2 is a top plan view of the carrier,

Figure 3 is an elevation thereof looking into the open front and showing it engaged upon a stack of bricks,

Figure 4 is a side elevation of a stack of bricks mounted on a pallet, this view also showing the pallet engaging elements,

Figure 5 is a diagrammatic side elevation illustrating the method of using the device,

Figure 5^a is a continuation of Figure 5, and

Figure 5^b is a continuation of Figure 5^a.

Referring to the drawings in detail, I have shown the carrier, designated as a whole by the numeral 1, as comprising a preferably elongated body including sides 2, a back wall 3 and a top 4, the front and bottom or lower end being open. Quite naturally this body may be constructed of any suitable material though sheet steel is preferred and it is clear that it may consist of any suitable number of sheets or pieces riveted or otherwise secured together. The forward edges of the sides and top are reinforced by an angle bar or frame member 5 of angle bar construction riveted in place as shown at 6. If the frame member 5 be in one piece it would be preferably of U-shape and it is so illustrated though there is no limitation in this respect as it may consist of a number of sections secured together. In a similar manner, the lower or open end of the body is reinforced by an angle bar or bars 7 riveted as at 8 to the sheet or sheets forming the body. The upper rear edge is braced and stiffened by a reinforcing angle bar 9 riveted at 10 to the back 3 and top 4. It is likewise preferable to provide other angle bars 11 which extend from the front to

the back of the body and which are riveted to the top 4 as shown at 12 and to the upwardly projecting portions 13 of the sides 2 as indicated at 14. It will be observed that these extensions 13 are formed with holes 16 near the rear corners for the reception of a transverse pipe or other tubular member 17 provided for the purpose of facilitating handling of the body for use on a certain type of truck body for which I have obtained Letters Patent, the truck body mentioned being intended to be loaded by a system which may be carried on by utilizing the carriers forming the subject matter of the present application. Near their forward corners the upward extensions are formed with other holes 18 within which may be engaged crane hooks 19 for hoisting purposes as will be explained.

When the body of the carrier is set upright upon the ground it is necessary that the open bottom be spaced above the ground, and for this reason I have illustrated foot members 20 and 21 riveted or otherwise secured as at 22 to the angle bars 7. These foot members are preferably of I-beam construction and those indicated at 20 may have their lower surfaces straight or plane while those indicated at 21, located at the rear corners are rounded off or curved as indicated at 23 so as to permit tilting of the carrier into either selected position when it is deposited upon the ground or other surface.

The above described body is intended to be placed over a hack or stack 24 of bricks or other block-like members while they are resting upon a pallet 25. Ordinarily such pallets include a platform 26 equipped at its underside with beams or cleats 27, and in the present instance one cleat is represented as being spaced from one longitudinal edge of the pallet or platform thereof. In the present instance the intention is that the pallet itself will form the end gate or closure for the open bottom of the body.

For connecting the pallet temporarily with the body 1, I make use of elongated preferably tubular members 28 which may, in actual practice, be simply suitable lengths of pipe, which members are disposed beneath the platform portion of the pallet and adjacent the cleats 27. Extending transversely through the end portions of these pipe members 28 are pins 29 which project therebeyond at one end. It should of course be understood that the members 28 might be solid with projections cast or otherwise formed thereon, such a structure being the equivalent of that disclosed. The means for coupling the members 28 to the body 1 is represented as comprising levers 30 pivoted, as shown at 31, between pairs of angle bars, brackets or the like 32 riveted at 33, or otherwise suitably secured to the sides 2 of the body and preferably to the angle bars 7. The levers are of curved formation so that the intermediate portions thereof will lie against the sides of the body with the ends spaced away from the sides to permit grasping thereof by an operator when occasion arises. Pivoted at 34 upon the intermediate portions of the levers are yokes 35 which are likewise preferably curved and which carry links 36 from which are suspended substantially pear shaped links or loops 37 through which the members 28 may be passed when the pins 29 thereon are arranged longitudinally of the links or loops 37. After being placed in position, the intention is that the members 28 be rotated through an arc of 90° to bring the pins 29 in transverse relation to the links or loops 37 so as to prevent accidental withdrawal of the members 28.

In the use of the device, it will be apparent that when it is desired to lift a hack or stack of bricks by means of the travelling or other crane, the body 1 is placed over and about the stack 24 and the members 28 are inserted beneath the pallet 25 and engaged through the pear shaped links or loops 37 while the levers 30 are in downwardly or outwardly swung position. Of course the members 28 must be inserted through the loops or links while the pins or other similar elements 29 are in upright position and subsequently to this the members 28 are partially turned to bring the pins 29 into horizontal position. The levers 30 are then forced upwardly or toward each other to draw the members 28 firmly into place. By this means the pallet 25 will be locked with respect to the body 1 so as to form an end gate or bottom closure therefor. A crane hook 19 or the like may then be engaged within either of the holes 18, or if a pair of hooks be employed they are engaged through both. When the device is subsequently lifted, as indicated in Figure 1, it is quite clear that the center of gravity will be such that the body enclosing the stack will be inclined with its back wall tilted rearwardly and upwardly, the stack of bricks remaining gravitationally against the back wall 3. As the stack is enclosed it is apparent that it will remain intact and that none of the bricks can be displaced. When the device is subsequently lowered after having been transported to the desired place the shoes or foot members 21 will first engage the ground, whereupon the operator may tip the device either forwardly or rearwardly so that as lowering is continued the body may be caused to be deposited either in upright position, with the pallet lowermost, or in horizontal position with the back 3 lowermost. The upright position is proper when it is intended to leave the stack intact and in such an instance the levers 30 are moved downwardly and outwardly to relieve the tension on the members 28 so that they may be partially turned and withdrawn from the loops or links 37, thus releasing the pallet and permitting the body to be lifted off and

away from the stack. In the construction of the body it is preferable that the sides 2 flare outwardly toward the open front to facilitate the engagement of the body upon a stack of bricks and also to facilitate its removal so that the sides will not catch or hang on the stack and disarrange any of the bricks. It should also be noted that the shape of the levers 30 and yokes 35 is such that the weight of the stack on the pallet will tend to force the levers against the sides 2 of the body, there being consequently no danger of dropping down of the pallet. Depositing of the device in horizontal position upon its back is done only when it is desired to dump the stack. Clearly when the device is in this position the pallet may be released and removed so that upon subsequent hoisting of the body alone the stack of bricks will be dumped, their stacked order being of course broken.

To illustrate the utility and advantages of the device I have, in Figures 5, 5[a] and 5[b], shown a series of steps in handling stacks of bricks. Referring to these figures the reference character 38 designates a brick kiln from which the stacks of bricks 24 are delivered along a gravity or other conveyor 39. The numeral 40 designates an elevated trackway for a travelling crane 41, and the reference characters 42 and 43 designate, respectively, a railroad car and a scow to be loaded with the stacks of bricks. Assuming that it is desired to load stacks of bricks from the kiln on to the car 42, the carriers 1 are placed over the stacks 24 and the crane 41 brought into play for lifting the stacks onto the car and it may be preferable to leave the carriers upon the stacks to avoid displacement of the stacks during transportation. If, however, it is merely desired to place the stacks in storage as indicated at 44 in Figure 5, the carriers are disengaged from the stacks after they have been placed in the proper position. For loading the scow 43, with the stacks taken from the storage place 44, the carriers must of course be disposed about the stacks so that hoisting and transporting may be accomplished by means of the crane, the carriers containing the stacks being properly packed on the scow and the carriers being left in position upon the stacks in the same manner as on a railroad car.

In Figure 5[a] I have illustrated the system of handling involved at the other end of the line in unloading the scow and at this point there is a similar travelling crane structure for hoisting the carriers to a loading platform or the like 45 from which the carriers, containing the stacks, may be lifted onto a truck 46 such as that referred to above, which truck is here represented as having its own hoisting mechanism 47.

In Figure 5[b] I have illustrated, diagrammatically, a building in the course of construction, an elevator or derrick 48 being mounted thereon. Assuming that the carriers containing stacks have been transported from the loading platform 45 to the scene of building operations, the carriers containing the stacks are unloaded from the truck 46 by means of its own hoisting mechanism 47, and the carriers are then lifted by means of the elevator or derrick structure to that part of the building where the bricks are needed, at which point the carriers are deposited and tipped into horizontal position so that upon removal of the pallets and subsequent lifting of the carriers alone the stacks of bricks may be dumped.

From the foregoing description and an inspection of the drawings it will be quite clear that I have thus provided an extremely efficient device by means of which stacks of bricks may be quickly and conveniently moved about from place to place and handled as many times as necessary, even under the most adverse circumstances, while keeping the stacks absolutely intact and in symmetrical arrangement upon the ordinary pallets. Obviously there will be a great saving of time and labor.

While I have shown and described the preferred embodiment of the invention, it should be understood that the exact disclosure is merely illustrative as the right is reserved to make all such changes in the actual details of construction and arrangement of parts as will not depart from the spirit of the invention or the scope of the claims hereunto appended.

Having thus described the invention, I claim:

1. Means for holding intact a stack of bricks during transportation, the bricks being carried by a conventional pallet, comprising a carrier having its front and bottom open adapted to be engaged upon and about the stack, and movable means for connecting the pallet to the body whereby the pallet will constitute a bottom closure.

2. Means for holding intact a stack of bricks during transportation, the bricks being carried by a conventional pallet, comprising a carrier having its front and bottom open adapted to be engaged upon and about the stack, and removable means for connecting the pallet to the body whereby the pallet will constitute a bottom closure, the body being provided with means for connection of a hoist therewith.

3. Means for holding intact a stack of bricks during transportation, the bricks being carried by a conventional pallet, comprising a carrier having its front and bottom open adapted to be engaged upon and about the stack, and means for connecting the pallet to the body whereby the pallet will constitute a bottom closure, the body being provided with a plurality of selectively usable

means for connection of a hoist therewith at different points, the location of one of said means being adjacent the forward portion of the body whereby the center of gravity of the load will be at a point causing the back of the body to be inclined upwardly and rearwardly to form a rest for one side of the stack, and the other of said means being located adjacent the plane of the closed back.

4. Means for holding intact a stack of bricks during transportation, the bricks being carried by a conventional pallet, comprising a carrier having its front and bottom open adapted to be engaged upon and about the stack, and means for connecting the pallet to the body whereby the pallet will constitute a bottom closure, the body having sides flaring throughout toward the open front facilitating its engagement upon a stack.

5. Means for holding intact a stack of bricks during transportation, the bricks being carried by a pallet of platform formation having cleats at its underside, comprising a carrier having its front and bottom open adapted to be engaged upon and about the stack, means for connecting the pallet to the body whereby the pallet will constitute a bottom closure, said means comprising members disposable beneath the pallet at the sides of the cleats, and elements carried by the body for receiving said members and drawing them bodily toward the body.

6. Means for holding intact a stack of bricks during transportation, the bricks being carried by a pallet, comprising a carrier having its front and bottom open adapted to be engaged upon and about the stack, means for connecting the pallet to the body whereby the pallet will constitute a bottom closure, said means comprising tension devices mounted on the body, depending elements connected with the tension devices, and members insertable beneath the pallet and insertable through said suspension elements.

7. A carrier for bricks arranged in stack form upon a pallet, comprising a body including a back, sides and a top, the body having its front and bottom open and being disposable about a stack in embracing relation thereto, means on the body for connection with a hoist mechanism, and detachable lever operated means located at opposite sides of the body and separately operable for locking the pallet to the body whereby the pallet will form a bottom closure.

8. A carrier for bricks arranged in stack form upon a pallet, comprising a body including a back, sides and a top, the body having its front and bottom open and being disposable about a stack in embracing relation thereto, means on the body for connection with a hoist mechanism, means for locking the pallet to the body whereby the pallet will form a bottom closure, comprising levers pivoted on the body, yokes pivoted upon the levers, links suspended from the yokes, and members disposable transversely beneath the pallet and engageable through said links.

9. A carrier for bricks arranged in stack form upon a pallet, comprising a body including a back, sides and a top, the body having its front and bottom open and being disposable about a stack in embracing relation thereto, means on the body for connection with a hoist mechanism, means for locking the pallet to the body whereby the pallet will form a bottom closure, comprising levers pivoted on the body, yokes pivoted upon the levers, links suspended from the yokes, members disposable transversely beneath the pallet and engageable through said links, and means for preventing withdrawal of said members from the links.

10. A carrier for bricks arranged in stack form upon a pallet, comprising a body including a back, sides and a top and having its front and bottom open, said body being disposable about a stack in embracing relation thereto, and means for locking the pallet to the body to form a bottom closure therefor, said means comprising a plurality of members disposable beneath the pallet to project beyond both sides thereof, and lever operated suspension means on the body at opposite sides thereof detachably engageable with said members.

11. Means for handling a stack of bricks resting upon a pallet, comprising a body member open at its bottom and adapted to be embracingly engaged about the stack, and means for securing the pallet to the body to form a bottom closure therefor, said means comprising members adapted to be inserted beneath the pallet and to project beyond both sides of said body, suspension devices depending from the body and detachably engageable with the ends of said members, and means for applying tension to said suspension devices.

12. A brick carrier comprising a pallet adapted to have bricks stacked thereon, a body disposable about the stack of bricks and including a back, sides and a top with its front and bottom open, the sides being prolonged upwardly beyond the top to define extensions, said extensions being apertured near the open front to provide for the engagement of crane hooks therewith, a transverse member extending through said extensions near the closed back for attachment of a separate hoisting mechanism, and means for locking said pallet to the body to form a bottom closure therefor.

13. A carrier for bricks arranged in stack form, comprising a pallet upon which the bricks are stacked, a body disposable in embracing relation to the bricks and including a back, sides and a top and having an open front and bottom, the body having hoist attaching means, and means for securing the pallet to form a bottom closure for the body

comprising members disposable transversely beneath the pallet to project beyond the sides of the body, suspension elements slidably receiving said transverse members, arms connected with said suspension elements, and levers pivoted on the opposite sides of the body and having said arms pivoted thereto at locations whereby the pivot points of the arms will be located inwardly of the pivot points of the levers for maintaining the pallet immovable with respect to the body.

14. Means for holding intact a stack of bricks during transportation, the bricks being carried by a pallet, comprising a carrier equipped with suspension means and having its front and bottom open, the carrier being adapted to be engaged upon and about the stack, means disposable transversely beneath the pallet, and means on the carrier connected with said transverse means for drawing the same and the pallet against the carrier to form a bottom closure therefor.

15. A device for holding intact a stack of bricks during transportation, the bricks being on a pallet, comprising a carrier open at its front and bottom and adapted to be embracingly engaged upon and about the stack, transverse members extending beneath the pallet, and lever operated clamps on the carrier engageable with said transverse members for holding the pallet against the carrier to form a bottom closure therefor.

In testimony whereof I affix my signature.

ROBERT A. FONTAINE.