Sept. 2, 1930. J. J. FULLERTON 1,774,643

APPARATUS FOR HANDLING FREIGHT

Filed Jan. 10, 1928 3 Sheets-Sheet 1

Fig. 1.

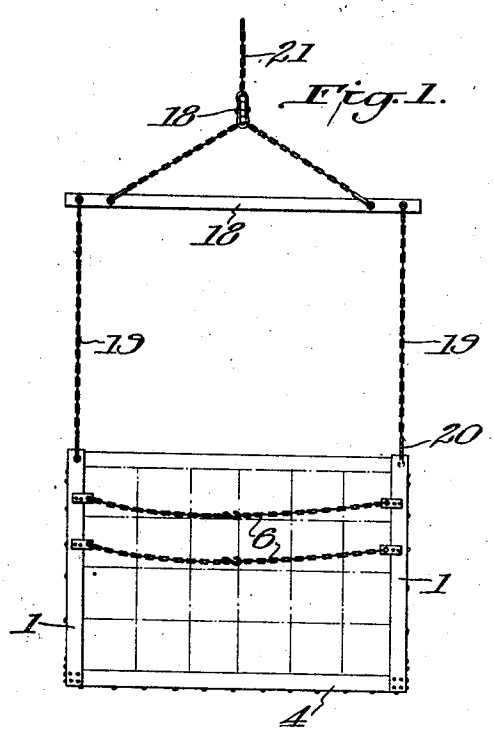


Fig. 2.

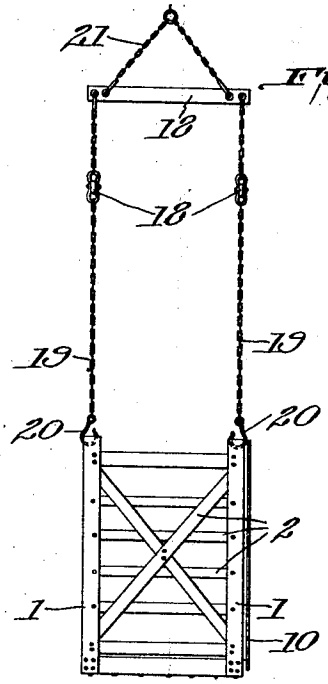
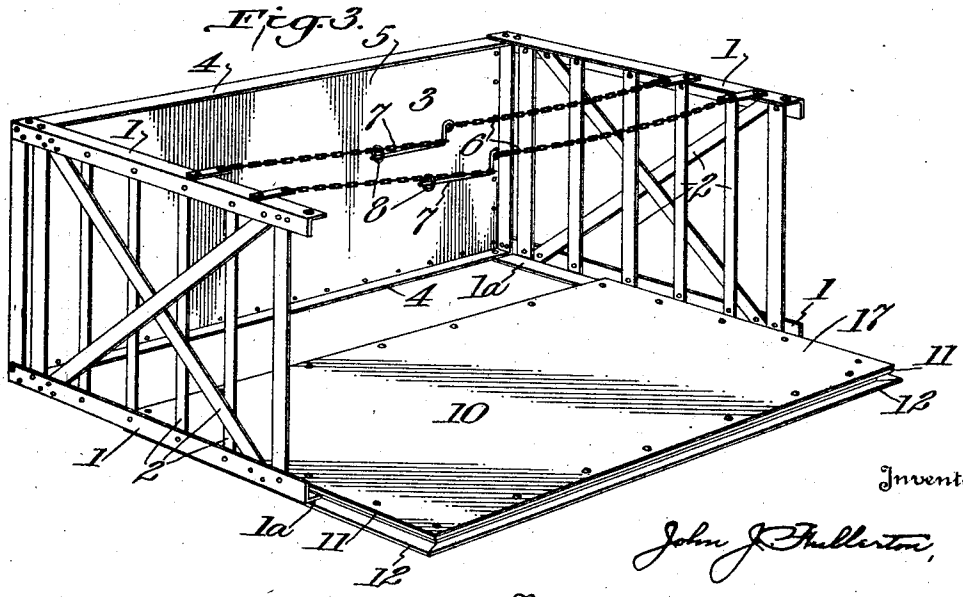


Fig. 3.



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Sept. 2, 1930. J. J. FULLERTON 1,774,643

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Filed Jan. 10, 1928 3 Sheets-Sheet 2

Fig. 4.

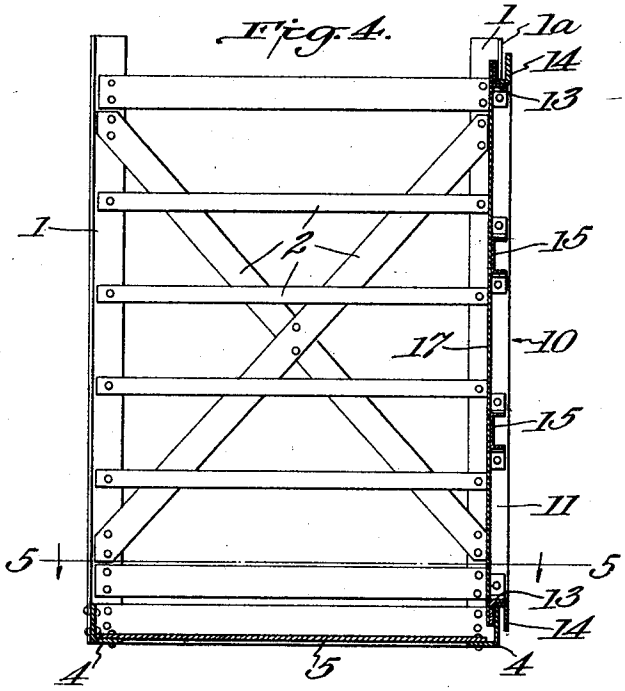
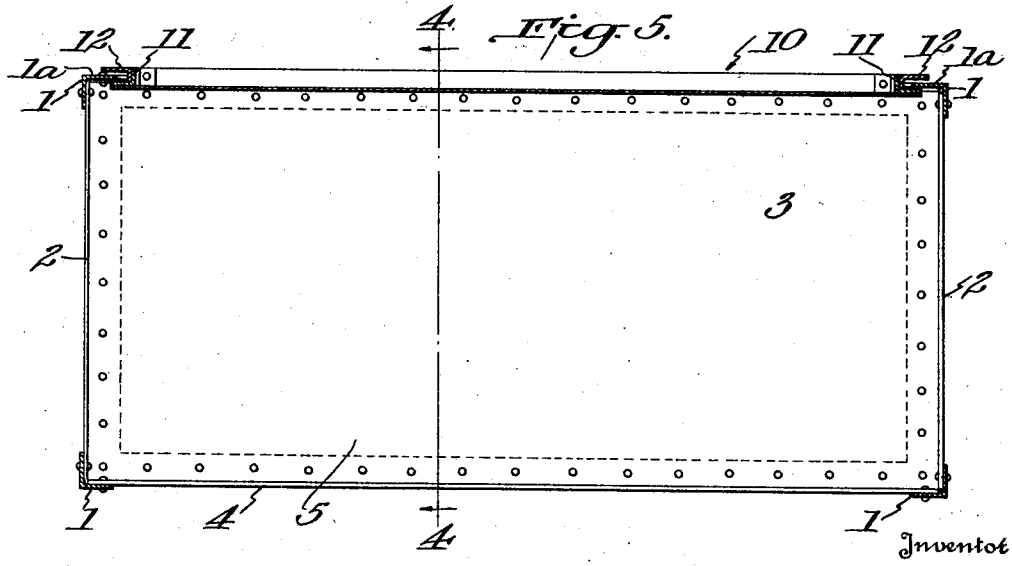


Fig. 5.



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Sept. 2, 1930. J. J. FULLERTON 1,774,643

APPARATUS FOR HANDLING FREIGHT

Filed Jan. 10, 1928 3 Sheets-Sheet 3

Fig. 6.

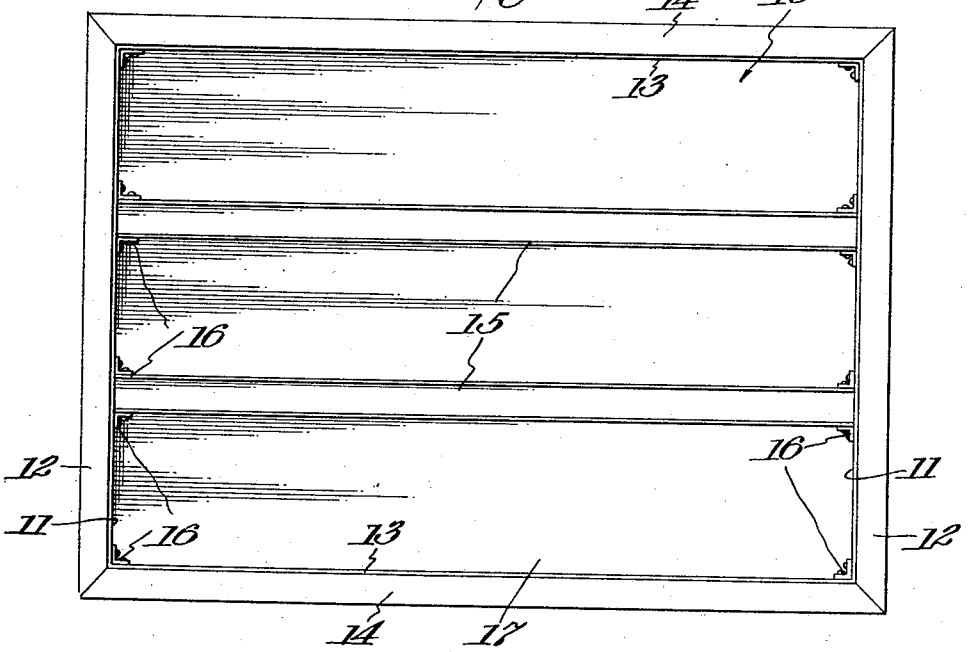
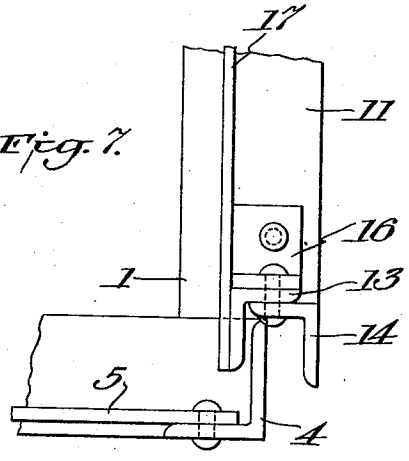


Fig. 7.



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UNITED STATES PATENT OFFICE

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APPARATUS FOR HANDLING FREIGHT

Application filed January 10, 1928. Serial No. 245,771.

This invention relates to an apparatus for handling freight.

The general purpose of the invention is to greatly reduce the manual labor consumed in handling and shipping articles such as hollow tile, brick or the like from the factory or kiln to their place of ultimate use.

One object of the invention is to provide a container adapted to detachably receive a separable platform upon which platform the articles are eventually deposited for shipping.

The invention contemplates in general the provision of a crate having an open top and an open side, with means thereon whereby it may be picked up by a crane or other mechanical handling device. The open side of the crate is adapted to detachably receive a platform upon which the articles are shipped. The articles as finished at the factory or kiln will be piled upon the bottom of the crate, without the removable side in place. The loaded crate will then be picked up by the traveling crane and transported to a storage point, or to a freight car, truck or other means of transportation, if shipment is to be made at once. A plurality of detachable sides which fit the crate will be provided at the storage or shipping point, and one of these sides will there be connected to the crate. The entire crate with its load will then be tilted 90° so that the detachable side receives the load as a bottom. The crate is then removed from the side, the load remaining on this detachable side which serves as a shipping platform. The load will remain upon this shipping platform, being picked up and handled as a unit by similar crates at all points at which the load is moved, to the point of ultimate use of the articles.

A great saving of manual labor, a material reduction in breakage and loss of the articles shipped, and an efficient and economical mode of transportation follow from the use of this novel crate and platform.

The invention is set forth more fully in the following description, taken in connection with the drawings, and further objects and advantages will be apparent.

Fig. 1 is a side elevation of the crate as filled with hollow tile,

Fig. 2 is an end elevation thereof,

Fig. 3 shows the crate and the detachable side partly separated,

Fig. 4 is a section on line 4—4 of Fig. 5,

Fig. 5 is a top plan of the crate and side assembled.

Fig. 6 is a bottom view of the detachable side and

Figure 7 is an enlarged view of one corner of the crate with the detachable side in position.

Referring to the drawings, the crate is made up from four corner angle irons 1 having suitable cross and diagonal braces 2 between the two adjacent end angles 1, thus forming two rigid ends for the crate. These two ends are rigidly secured to a bottom 3 formed of two longitudinal side angle irons 4, one flange of each of said angles being riveted to the corner angles 1. A sheet metal plate 5 is riveted to the inwardly projecting flanges of angles 4.

Chains 6 are secured to two of the corner angles 1, and these chains have pivoted hooks 7 thereon for cooperation with sliding eyes 8 to thereby tighten the chains.

The crate as thus formed has one side entirely open except for the two inwardly projecting flanges of two corner angles 1.

For cooperative engagement with the open side of the crate there is provide a removable side 10. This side 10 is made up of side and end angle irons forming a rectangular frame and having channel irons as bracing. At each end, angle irons 11 and 12 are assembled with two flanges overlapped and facing one another, the remaining flanges being spaced apart to form a **U** in cross section, as clearly seen in Fig. 5. Angle irons 13 and 14 are similarly arranged along the sides.

Cross channel members 15 are arranged with the outer surface of their webs flush with the angles 11 and 13. The framework thus formed is securely riveted together, and corner braces 16 are provided to insure a rigid and strong frame. A top plate 17 of sheet metal is then riveted to the frame.

The removable side 10 may be easily at-

tached to the crate by sliding movement, the U shaped opening left between the flanges of angles 11 and 12 engaging the inwardly projecting flanges 1ª of the corner angles 1, as seen in Fig. 5. The U shaped opening between flanges 13 and 14 of the bottom engages over the upwardly projecting flange of the angle 4, as seen in Fig. 4.

The loaded crate is handled by the means shown in Figs. 1 and 2. A frame 18 carries depending chains 19 having hooks 20 on their lower ends for engagement with openings in the upper ends of corner angles 1. The frame 18 is picked up by a crane or the like by means of chains 21.

The operation is as follows:

The crate is placed upright as seen in Figs. 1 and 2 and loaded. The lifting mechanism is then attached by hooks 20 and the loaded crate is picked up and moved to a storage point or to the transporting means, such as a scow, truck or railroad car. The loaded crate is here deposited and a removable side 10 is slid into position, as seen in Figs. 4 and 5. The crate with its load is then tilted 90° so that the load rests on the removable side 10. The crate is then slid off the side, see Fig. 3. The side 10 is shipped as a loaded platform, and at each point where it must be moved from its support a handling crate is provided and the above operations are reversed; that is, the crate is slid into engagement with the platform or side 10, the load is tilted to the position of Fig. 1 and moved. By this means the articles to be shipped are picked up by hand only once, and they remain associated with a platform or side 10 to be shipped thereon. A great saving of manual labor results therefrom.

The invention is not limited to the details shown since various changes may be made within the scope of the invention, as defined in the appended claims. It will be clear that an end wall of the crate may be attachable and removable therefrom instead of the side wall as shown, and the use of the term "removable side" in the claims is intended to cover either a side wall or end wall.

In the above mode of operation, the removable side 10 is described as attached to the loaded crate after the same has been picked up and deposited on a support. It will be clear, however, that the side may be slid into position on the crate before the same is picked up. Also, the removable side may be itself loaded and the crate then slid into engagement therewith and the above operations carried out.

These and other obvious changes are within the scope of this invention as expressed in the appended claims.

I claim:

1. A loading and shipping apparatus for handling a plurality of articles comprising a crate having an open side, and an imperforate detachable side wall for engagement with the open side of said crate, said side wall constituting a platform upon which the articles are shipped.

2. A loading and shipping apparatus for handling a plurality of articles comprising a crate having at least three sides rigidly connected, an open side, and a side wall having means thereon for sliding engagement with said crate to thereby close the open side thereof, said side wall constituting a shipping platform for the articles.

3. A loading and shipping apparatus for handling a plurality of articles including a crate having an open side, an imperforate bottom wall, and end walls rigidly fixed thereto, said end walls having inwardly projecting flanges thereon adjacent the open side of said crate, and a detachable side wall having grooves on two edges thereof for sliding engagement with the inwardly projecting flanges of said end walls.

4. A shipping platform adapted for detachable engagement with a loading crate comprising an imperforate rectangular plate having continuous outwardly directed grooves on two opposite edges thereof.

5. The structure as in claim 4 wherein the grooves on the opposite edges are provided by the spaced flanges of rigidly secured angle irons.

In testimony whereof, I affix my signature.

JOHN J. FULLERTON.