G. W. STITZER.

SHIPPING CASE.

APPLICATION FILED JULY 5, 1911.

1,082,567.

Patented Dec. 30, 1913.

2 SHEETS—SHEET 1.

Fig. 1.

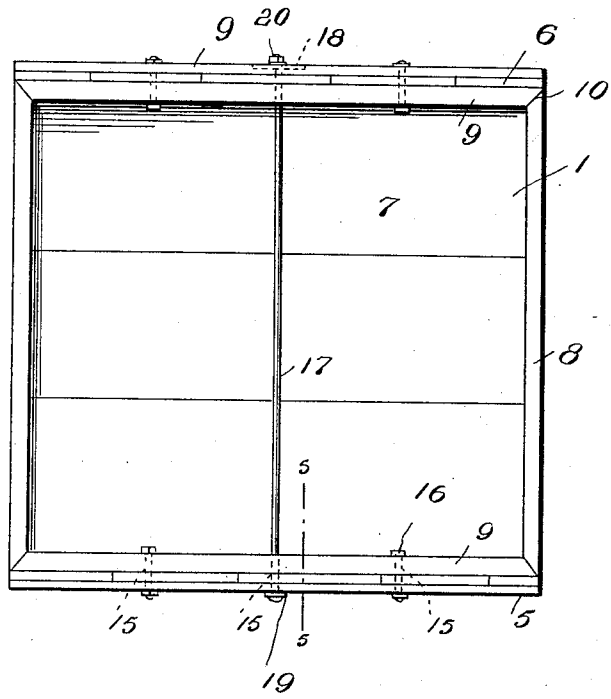


Fig. 2.

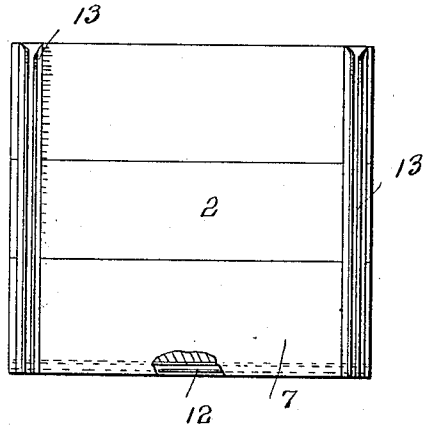
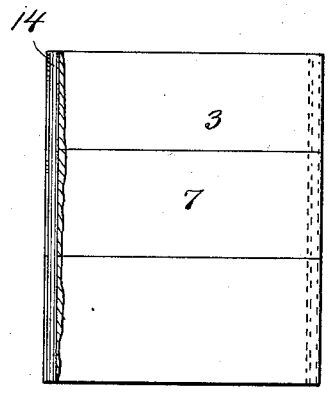


Fig. 3.



Witnesses

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2 SHEETS—SHEET 2.

Fig. 4.

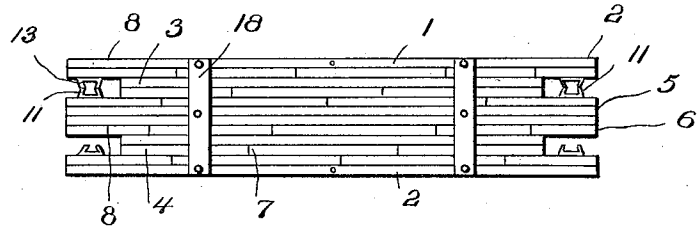


Fig. 5.

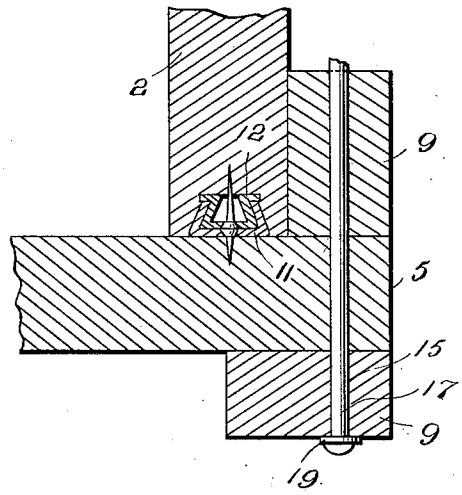
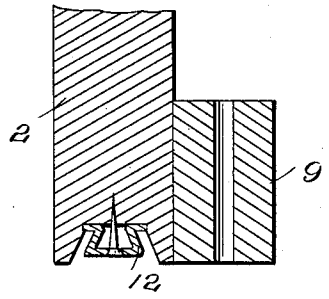


Fig. 6.



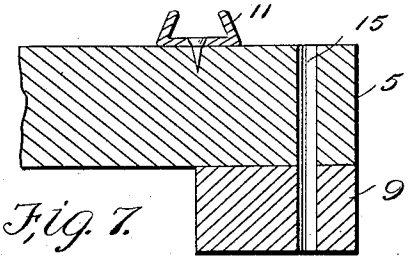


Fig. 7.

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UNITED STATES PATENT OFFICE.

GEORGE W. STITZER, OF MAHANOY CITY, PENNSYLVANIA.

SHIPPING-CASE.

1,082,567. Specification of Letters Patent. Patented Dec. 30, 1913.

Application filed July 5, 1911. Serial No. 636,915.

To all whom it may concern:

Be it known that I, GEORGE W. STITZER, a citizen of the United States, residing at Mahanoy City, in the county of Schuylkill and State of Pennsylvania, have invented new and useful Improvemnts in Shipping-Cases, of which the following is a specification.

This invention relates to shipping crates and more particularly to knock-down or collapsible crates or boxes.

The object of the invention is to provide a packing or shipping case wherein all the parts are separable one from the other and are held in operative position for receiving goods or the material to be packed and which may be knocked down and secured in compact form for return shipment or for storage.

Further objects of the invention will appear as the following specific description is read in connection with the accompanying drawings, which form a part of this application, and in which:—

Figure 1 is a side elevation of the box. Fig. 2 is an elevation of one of the side members looking from the inside. Fig. 3 is a similar view of one of the end members. Fig. 4 is a side elevation showing the parts packed together for return shipment. Fig. 5 is a detail section on the line 5—5 of Fig. 1. Fig. 6 is a detail sectional view of one of the side members on an enlarged scale. Fig. 7 is a similar view taken through the bottom.

Referring more particularly to the drawings, 1 and 2 represent the side members of the box, 3 and 4 the end members, 5 the bottom member and 6 the top member. Each of these parts is constructed preferably of a plurality of boards 7 reinforced upon their ends by cleats 8 and upon their sides by cleats 9 which are mitered at the corners, as shown at 10, and secured to each board of the part in any suitable manner, as by nails, screws or otherwise.

The bottom 5 has secured, adjacent its sides, suitable channel members 11 which are screwed thereto and the side members have embedded in their lower edge the channel engaging members 12 adapted to be received in the channel member, as shown in Fig. 5. These side members are also provided with channel members 13 adjacent their ends adapted to receive channel engaging members 14 embedded in the ends of the boards 7 which form the end members 3 and 4. The bottom member 5 is provided with a plurality of holes 15, one of which is arranged in its center. The top member is similarly provided with holes and these holes in the top and bottom members extend through the reinforcing members 9 upon the side members through the boards of the bottom member and through the reinforcing member 9 carried by the bottom member. Suitable bolts 16 and 17 are passed through the apertures, the latter bolt extending entirely across the side member and passing through the plate 18 which is recessed or countersunk into the reinforcing member 9 of the top. Similar plates 19 are provided for the bottom member which act as washers for the bolts 17 and which also are utilized, as will be hereinafter described, to hold the parts together in compact form for return shipment.

In setting up the box the side members have their channel engaging members 12 slid into the channel members 11 until the ends of the side members are flush with the end edges of the bottom member. The end members 3 and 4 then have their channel engaging members 14 engaged with the channel members 13 of the side members and are forced downwardly until they rest upon the bottom. The goods to be packed or shipped are then placed in the box, the lid or top member placed thereon and the bolts 17, which have been previously inserted through the aperture 15 in the bottom and side members, are passed through the top member and its reinforcing strip 9 and also the plate 18, the nuts 20 being threaded thereon to hold the top in position. As the bolt apertures in which the bolts 15 are shown are necessary the bolts 16 are also passed in these apertures to make the connection more secure.

When the parts are assembled for return shipment one of the side members is preferably placed upon the bottom. The end member is then placed between the channel members thereof, the top member then seated upon the end member, the bottom placed upon the top with its channel member above,

the end member then placed between the channel member and top of the bottom and the opposite side is then placed upon the end member with the channel members thereon depending and extending toward the channel members of the bottom member. The thickness is equal to the length of the plates 18 and 19 and the holes in the end thereof are adapted to register with the holes through which the bolts 16 are passed when the crate is set up. The bolts 16 are then passed through the plates and through the holes in the reinforcing members 9 of the side members 1 and 2. It will therefore be seen that the only operation necessary when the crate is desired to be set up is to remove the bolts, slide the side and end members into position and place the bolts 17 through the bottom members and top upon the outside of the side members. It will also be noted that these bolts lie within the space formed between the outer surface of the reinforcing members and the boards and that they are thereby protected from engagement with any exterior object. The bolts 16 may be dispensed with as the bolts 17 will effectively hold the parts in position and not only tend to hold the top in position but also prevent the bottom from sliding upon the sides, or vice versa.

Having thus described the invention, what I claim as new is:—

A packing crate comprising a bottom member, side members, end members and a top member, each member constructed of a plurality of boards, reinforcing members to connect the boards together, channel members carried by the bottom and side members, channel engaging members carried by the side members and the end members, bolts passing through the top and bottom members and certain of the reinforcing members upon the side members, said means adapted to secure the side members against disconnection from the bottom member and to hold the top upon the side and end members, and washer plates having means to receive said securing means when the parts are piled one upon top of the other in collapsed form.

In testimony whereof I affix my signature in presence of two witnesses.

GEORGE W. STITZER.

Witnesses:
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L. E. WALTERS.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."