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G. M. THOMPSON

BOX PACKING DEVICE FOR FREIGHT CARS

Filed Aug. 2, 1923

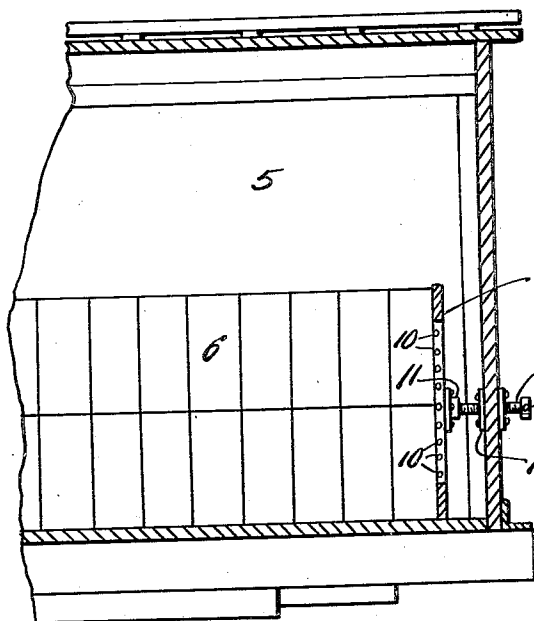


Fig. 1.

Fig. 3.

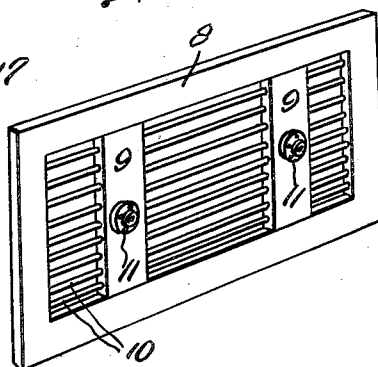


Fig. 2.

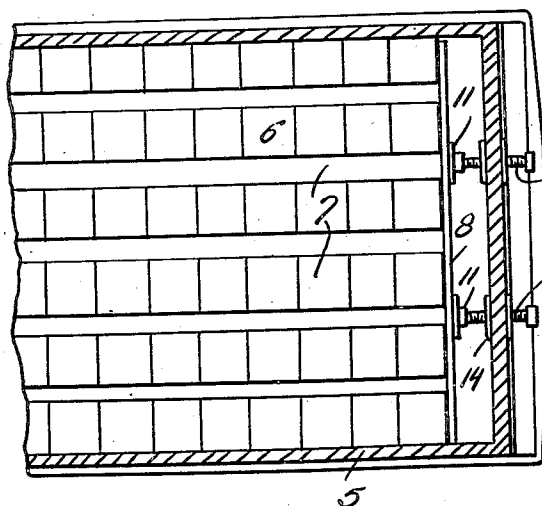
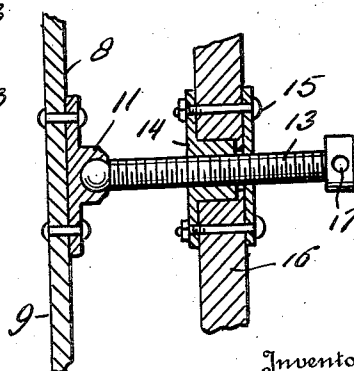


Fig. 4.



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UNITED STATES PATENT OFFICE.

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BOX-PACKING DEVICE FOR FREIGHT CARS.

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To all whom it may concern:

Be it known that I, GEORGE M. THOMPSON, a citizen of the United States, residing at Avon Parks, in the county of Highlands and State of Florida, have invented certain new and useful Improvements in Box-Packing Devices for Freight Cars, of which the following is a specification.

This invention relates to loading of freight cars and has particular reference to an improved device for the packing or pressing of boxes of fruit in contact with each other within the car for shipment.

In loading boxes of fruit or the like into a refrigerator or a ventilated car there is always a certain amount of space to be taken up lengthwise of the car, in order to prevent damage caused by the cars jolting when being switched or abruptly stopped. The ordinary method of loading these boxes into cars in use at the present time is to load from both ends of the cars finishing in the doorways or middle of the cars and then wedging between the adjacent tiers of boxes to prevent their movement. This method is not altogether satisfactory and there are several small devices intended to push the boxes apart enough to allow the insertion of the last box. However, as there is much space to take up, it is necessary to nail strips of wood or heavy material to provide an abutment between the last rows of boxes.

In the use of my device, the car is loaded completely from one end to the other and means is provided which is operable at the outside of the car to apply pressure on the boxes at one end of the car so as to tighten all of the boxes in the car at one time and hold them tight until intentionally relieved.

An object of the invention is to provide a means or device of the nature above mentioned which embodies desired qualities of simplicity, durability and efficiency of operation.

Other objects of the invention will become apparent as the nature of the invention is better understood and the same consists in the novel form, combination and arrangement of parts, hereinafter more fully described, shown in the accompanying drawings, and claimed:

In the drawings, wherein like reference

characters indicate corresponding parts throughout the several views—

Figure 1 is a fragmentary longitudinal vertical sectional view of a freight car equipped with the packing device constructed in accordance with the present invention.

Figure 2 is a horizontal longitudinal sectional view of the device shown in Figure 1 taken on a plane above the boxes.

Figure 3 is a perspective view of the follower plate, and

Figure 4 is a fragmentary sectional view illustrating details of the device.

Referring more in detail to the drawings, 5 indicates an end of an ordinary standard sized freight car of the ventilated type, and in accordance with the present invention, the car is loaded from the opposite end to that shown entirely through to the end shown as illustrated, there being three hundred and sixty boxes in this particular car placed on end and in two layers each with six boxes across the car and thirty boxes lengthwise. These rows of boxes are generally indicated at 6 and are spaced as at 7 for ventilating purposes. The packing device for forcibly packing the boxes of the rows in contact with each other includes a follower plate 8 of any desired or preferred form but preferably including a rectangular frame with cross panels 9 connected by rods 10 for permitting passage of air therebetween. This follower plate is slidable longitudinally on the bottom of the car and is of a height substantially equal to the height of the superimposed boxes as shown in Figure 1.

Attached to the panels 9 are ball sockets 11 in which are held the ball shaped inner ends 12 of adjusting screws 13 which are threaded in screw plates 14 suitably bolted as at 15 to the adjacent end wall 16 of the car, the screws 13 extending through an adjacent opening in said walls 16 as shown. The other end of each of the screws is provided with suitable means to facilitate the turning of the same, such as a transverse opening 17 adapted for reception of a bar or the like.

By the provision of the ball and socket joints between the screws and the follower plate, the latter is allowed to accommodate

itself to any unevenness in the rows of boxes without resulting in breakage of parts of the packing device and for insuring ease of movement of the follower plate under the influence of the screws 13 which may be operated from the exterior of the car. It is also apparent that the follower plate 8 may be adjusted into close relationship with the wall 16 in case the car is to be used in shipping other material requiring no packing.

The packing of boxes in freight cars in accordance with the above is capable of being accomplished in a given short length of time and with ease.

Minor changes may be made without departing from the spirit or scope of the invention as claimed.

What I claim as new is:

1. In combination with the body of a freight car, means for packing rows of boxes tightly within the car body when said boxes are placed from end to end of the latter, comprising a follower plate movable longitudinally of the car body upon the bottom of the latter and extending transversely from side to side of the car, and adjusting screws passing through an end wall of the car body and operable from the exterior of the latter for adjusting said follower plate.

2. In combination with the body of a freight car, means for packing rows of boxes tightly within the car body when said boxes are placed from end to end of the latter, comprising a follower plate movable longitudinally of the car body upon the bottom of the latter and extending transversely from side to side of the car, and adjusting screws passing through an end wall of the

car body and operable from the exterior of the latter for adjusting said follower plate, and ball and socket joints between the inner ends of said screws and said follower plate.

3. In combination with the body of a freight car, means for packing rows of boxes tightly within the car body when said boxes are placed from end to end of the latter, comprising a follower plate movable longitudinally of the car body upon the bottom of the latter and extending transversely from side to side of the car, and adjusting screws passing through an end wall of the car body and operable from the exterior of the latter for adjusting said follower plate, said follower plate comprising a rectangular frame having cross panels connected by spaced longitudinal bars around which air may circulate.

4. In combination with the body of a freight car, means for packing rows of boxes tightly within the car body when said boxes are placed from end to end of the latter, comprising a follower plate movable longitudinally of the car body upon the bottom of the latter and extending transversely from side to side of the car, and adjusting screws passing through an end wall of the car body and operable from the exterior of the latter for adjusting said follower plate, said follower plate comprising a rectangular frame having cross panels connected by spaced longitudinal bars around which air may circulate, and ball and socket connections between the panels of the follower plate and the inner ends of said screws.

In testimony whereof I affix my signature.

GEORGE M. THOMPSON.