July 5, 1949. C. P. LEWIS ET AL 2,474,949

BINDER FOR LOADING CARS

Filed Dec. 4, 1945 2 Sheets-Sheet 1

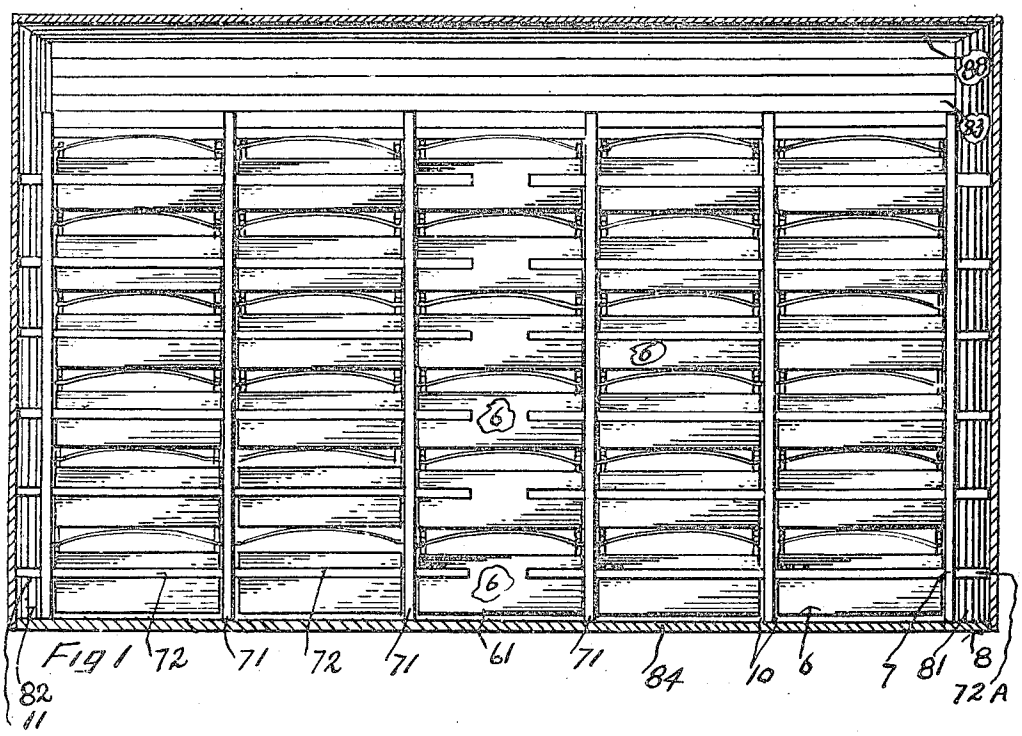


Fig 1

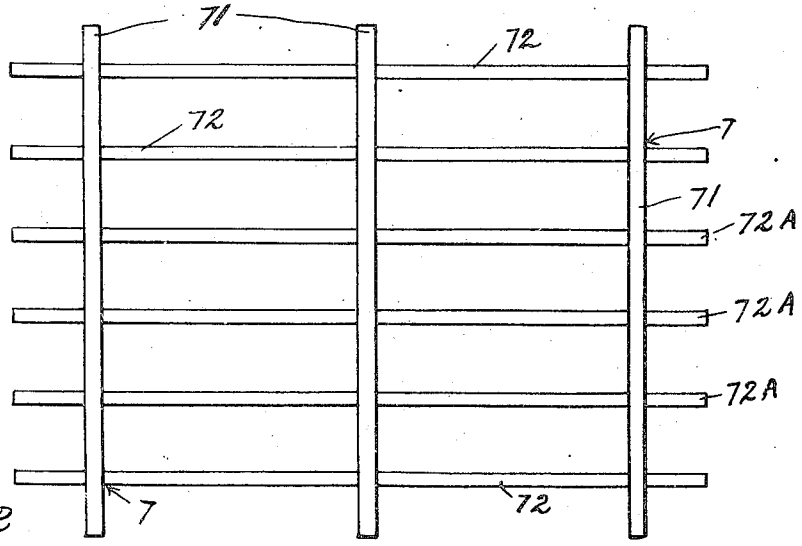


Fig 2

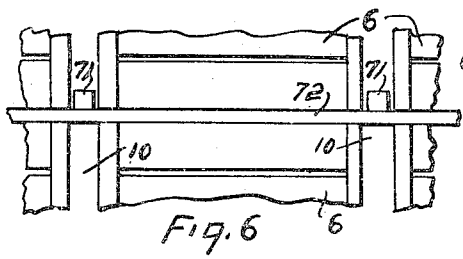


Fig. 6

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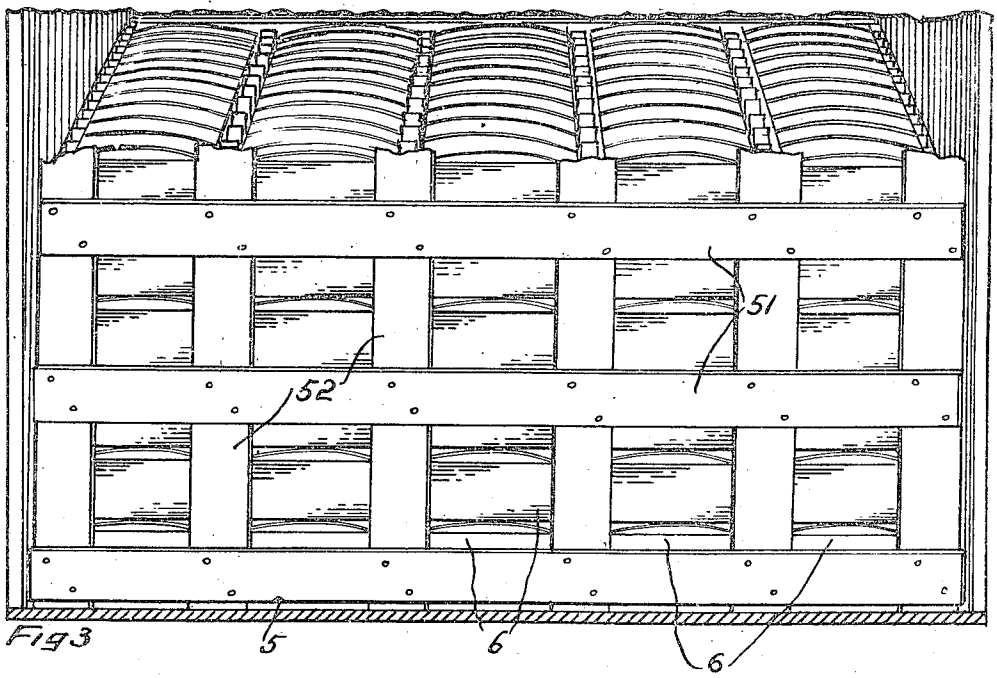


Fig 3

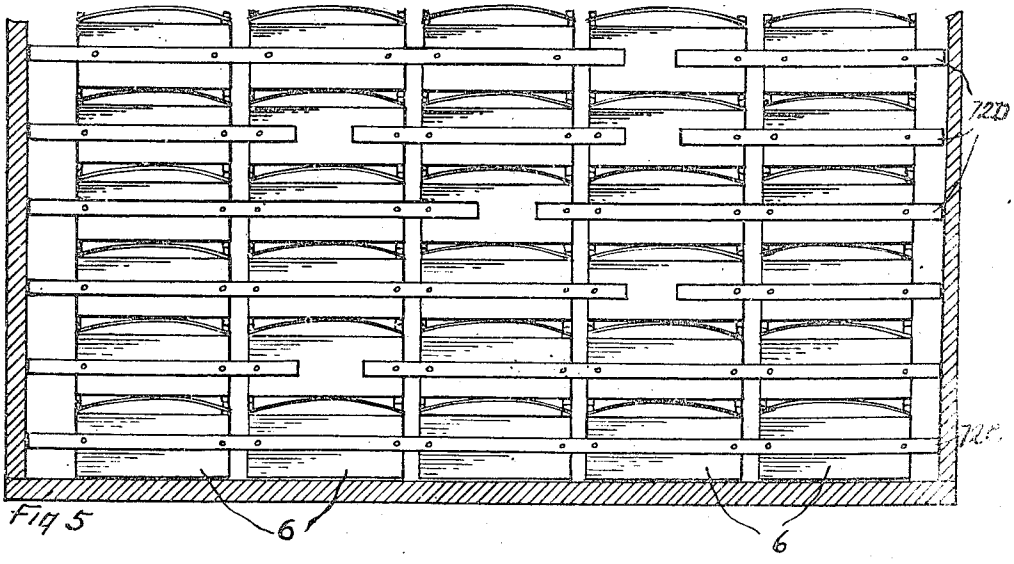


Fig 5

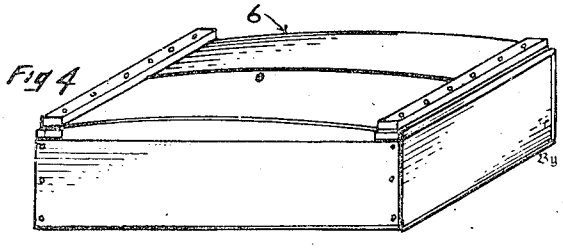


Fig 4

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BINDER FOR LOADING CARS

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6 Claims. (Cl. 105—369)

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Our invention relates to spacers and a method for securely packing lugs, or boxes of uniform sizes in a railway car. More specifically it comprises a unit spacer to be inserted between rows of stacks of boxes or lugs which spacers and lugs are clamped together in a position so that the completed load is rigid against side movements, and end movements of the car.

The objects attained by use of our improved spacer and method of loading is a rigid load, which cannot easily be shuffled or disarranged while the car is being transported for long or short distances. The spacers are constructed of inexpensive material, and easily made, and less lumber is required in the loading of a car than is required by present methods. It is not necessary to nail our spacers to the car or to the lugs, but they automatically remain in position and effective to hold the load rigid. They are quickly installed and thus greatly speed up loading. They are easily removed from the car and the load when unloading the car. They afford vents necessary in ventilating a car which is loaded with fruit.

These and other objects hereinafter disclosed are secured by means of the forms of spacers used and the method of loading the car hereinafter more fully described, and illustrated on the accompanying drawings, in which

Fig. 1 is a perspective view of the interior of a partially loaded car of lugs in which our spacers and method have been used.

Fig. 2 shows a unit spacer.

Fig. 3 is a perspective view of one half of a car loaded with fruit within lugs, showing the gate used at the end of the row of stacks near the middle of the car.

Fig. 4 is a unit lug used in our method of packing.

Fig. 5 is a modified form of spacer in which the posts are omitted and the spacers are nailed to the lugs.

Fig. 6 is a plan view of a load assembled with one of the novel gates of the present invention shown between rows of stacks of lugs, the lugs being only fragmentarily shown.

Referring to the drawing, our method, and the special spacer is usable only when a plurality of lugs 6 of approximately uniform shape and size are to be packed within one car. A unit spacer 7 consists of upright posts 71, and lengthwise strips 72 which are attached to posts 71 at approximately right angles thereto and at spaced distances apart as will be more definitely hereinafter set forth. The car referred to in this specification is designated 8. The inside wall of the right side of the car is shown as 81, the left side is shown as 82, and the end wall of the car as 83.

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To more definitely describe our method, it is noted that the boxes, or lugs are first arranged in individual stacks 61, each stack consisting of a plurality of lugs placed one on the top of another. When stacks 61 are placed within car 8, the stacks of lugs should be arranged parallel with ends 82 and 83 of the car. The stacks of lugs should be spaced apart. This space is indicated as 10. Thus arranged they are herein termed a row of stacks of lugs. The method for using our spacers and loading the car is as follows: When the first row of stacks of lugs have been positioned parallel with, and adjacent to the end wall 83 of the car, the stacks should be spaced apart to provide ventilation for the contents of lugs 6. The depth of such ventilating space is optional, and can be varied according to the width of the car and the length of the boxes, but with the use of lugs approximately 17 inches in length, a space of two inches is ample. In the drawing this space is indicated as 10. It is desirable in loading such cars that there be also a space 11 between the stacks of lugs at either end of each row of stacks and the side walls of the car. When the first row of stacks is thus positioned parallel with the end wall of car 8, two unit spacers 7 are positioned across the face of the row of stacks of lugs as shown in Fig. 1. In positioning the spacers, the bottom ends of posts 71 should rest on floor 84 of the car, and posts 71 should extend upward within spaces 10. Posts 71 should fit loosely within space 10, the only purpose for the posts being to hold cross strips 72 a spaced distance from the floor 84 of the car, and a spaced distance from each other. The posts as units, are not intended to function as spacers to hold lug stacks 63 apart, and if the posts should fit tightly between the stacks of lugs, such use of posts 71 would be merely incidental, and not a part of this invention.

Cross strips 72 are positioned on posts 71 so when assembled with a row of stacks of lugs, said strips 72 will extend across the faces of the free sides of lugs 6, strip 72 being aligned with lugs across the stacks. Cross strips 72 are cut to such length that one end, 72A, will abut either side wall 81 or 82, and the other end will extend approximately to the middle of the row of stacks of lugs. There are two unit spacers used on each row of stacks of lugs, one end of each cross strip 72 being snugly against the side wall of the car, and the other ends reaching to the center stack

of lugs indicated on the drawing at 61. These aligned cross strips should not overlap, but they can be spaced apart. This arrangement is shown in detail in Fig. 1 of the drawing. As soon as the first row of stacks of lugs are thus positioned and the two unit spacers are assembled therewith, a second row of stacks of lugs are positioned, spacers are inserted as hereinbefore described, and a third row of stacks of lugs is positioned. This arrangement of alternate rows of stacks of lugs and spacers is continued until the car is filled from each end toward the center of the car, and within a short distance of that center. To make a good load, each row of stacks extending across the car should be aligned with the rows of stacks theretofore loaded in the car so that the tiers of stacks of lugs running lengthwise of the car should all be parallel with the side walls 81 and 82 of car 8.

When the car has been loaded as hereinbefore described from both ends of the car, to a spaced distance from the center, a gate 5 is placed at the end of each half load. Gate 5 is constructed of upright posts 52 and horizontal planks 51 attached together. Pressure is placed on each gate adapting the rows of stacks of lugs and cross strips 72 to be tightly clamped as one unit against the end wall of the car.

Attention is called to the fact that in our improved spacer and method for loading cars, strips 72 are firmly pressed with lugs 6 against the end wall 83 of car 8, that the ends of strips 72 abut the side walls of the car and that when the lugs and strips are thus clamped together as a unit, the lugs are held from slipping together with the strips. While it is known that strips were used on the top of lugs formed in stacks, rows and tiers, they were not positioned to be clamped with the lugs as a unit, and a few side thrusts of a car would loosen the strips.

Our invention covers the broad application of the principles involved, such as shown in Fig. 5 in which posts 71 are dispensed with and strips 72B are nailed to the boxes on the side. These strips can extend entirely across the car as shown by strip 72C, or can be in short sections as shown by strip 72D. If the strips are in short sections, the end of each such strip should extend from a side wall of the car to an intermediate lug.

Having described our invention, we claim as new and ask for Letters Patent:

1. A load of lugs held rigidly in bulk in a car having a floor, sides and ends, said load comprising a plurality of stacks of lugs spaced apart in rows parallel to an end of the car, and in parallel relation with each other, gates positioned between contiguous rows forming said load, each gate being constructed of a plurality of horizontal binder strips attached at approximately right angles thereto to a plurality of vertical posts, the posts being spaced apart and positioned loosely in the space between contiguous stacks of lugs forming the rows, and the binder strips being spaced apart from each other, and being of such lengths, and so positioned, that they abut a wall of the car and extend along and against the sides of all lugs that are in contact therewith on each side thereof, whereby said load may be frictionally bound together by application of pressure to an end row of lugs.

2. A spacing unit for placement between rows of spaced stacks of lugs, said unit comprising, a plurality of posts having a width less than the spaces between said stacks, a plurality of spaced strips attached to said posts at substantially right angles thereto and being of uniform thickness vertically spaced apart a distance no greater than the height of one lug, said posts being so spaced apart as to be readily and loosely positionable in the spaces between said stacks while said strips lie along the sides of said lugs in frictional and pressure-transmitting contact therewith whereby a plurality of said rows and units may be clamped together as a rigid unit while keeping said rows in spaced relationship.

3. A spacing unit as defined in claim 2 wherein said strips are so spaced apart that adjacent strips extend along faces of vertically adjacent lugs in said stacks.

4. A spacing unit as defined in claim 2 wherein said strips, at one end, extend an equal and relatively short distance beyond an end post to simultaneously abut a wall of a compartment in which said lugs are located.

5. A spacing unit as defined in claim 2 wherein all of said posts are attached to the same side of said strips so as to enter the spaces between stacks of a single row.

6. A spacing unit as defined in claim 2 wherein certain of said strips, at one end, extend a relatively short distance beyond the adjacent end post to abut a wall of a compartment in which said lugs are located.

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