Feb. 28, 1950 H. J. GOFF 2,498,804

CAR LOAD SPACER

Filed Sept. 18, 1943

Fig. 4

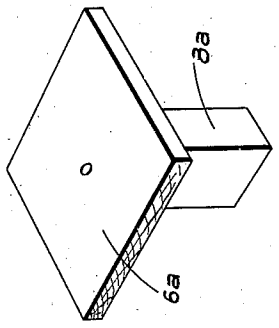


Fig. 3

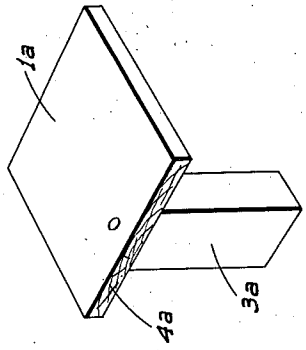


Fig. 2

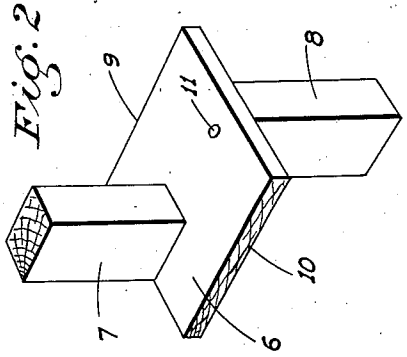


Fig. 1

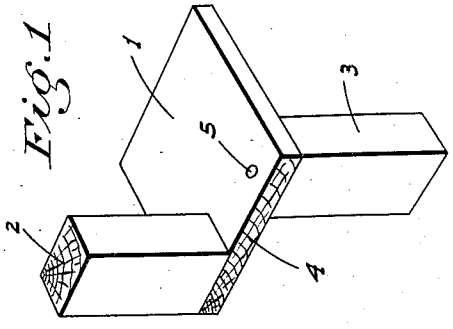


Fig. 6

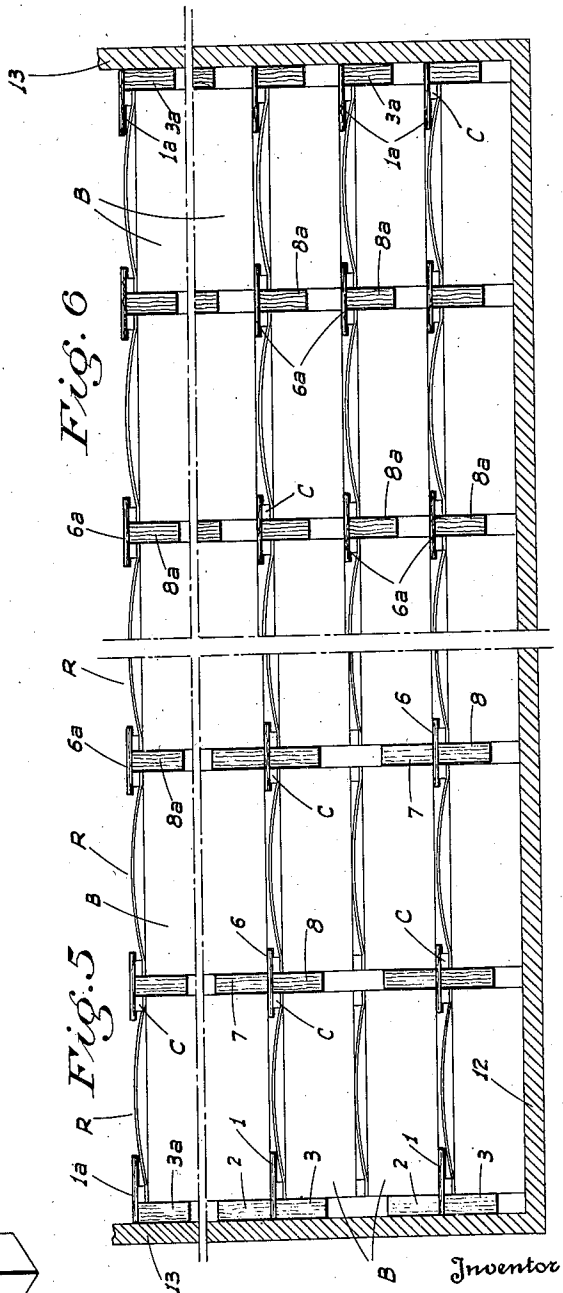


Fig. 5

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CARLOAD SPACER

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2 Claims. (Cl. 105—367)

1

This invention is directed to a box spacing device adapted primarily for use in railroad cars loaded with boxes of perishable foodstuffs, such as fruit and vegetables; the present invention representing modifications of the device shown in copending application, Serial No. 483,887, filed April 21, 1943, in the name of Clarence M. Ellis, now Patent No. 2,402,808, dated June 25, 1946.

This invention has for one of its objects the provision of a box or load spacing device whose structure is simplified, and which can be readily and inexpensively manufactured from lumber scrap with a minimum of milling and assembling operations.

Another object of the invention is to provide a box spacing device, for the purpose described, which comprises solely pieces of wood which are rectangular in configuration, and which is advantageous as it facilitates manufacture, assembly, and use of the device.

A further object of the invention is to provide a box spacing device which, when in use, supports the boxes of a load so as to permit desirable air circulation therethrough, while at the same time preventing the boxes from crushing the pack in the next lowermost box.

It is also an object to provide a box spacing device which in one form comprises a flat, rectangular plate having a rectangular spacing block seated and secured on end against one face of the plate, while in another form including a like block secured on and projecting from the other face of the plate; the blocks in the latter form being offset relative to each other but disposed in a plane parallel to opposite side edges of the plate.

A further object is to provide a simple and inexpensive device, and yet one which will be exceedingly effective for the purpose for which it is designed.

These objects I accomplish by means of such structure and relative arrangement of parts as will fully appear by a perusal of the following specification and claims.

In the drawings similar characters of reference indicate corresponding parts in the several views:

Figure 1 is a perspective view of one form of the device, showing the position of the two spacer blocks as secured to the plate for engagement between corresponding boxes and the adjacent wall of a railroad car.

Figure 2 is a perspective view of the same form of the device, showing the position of the two spacer blocks as secured to the plate for engagement between corresponding and adjacent boxes of a load.

2

Figure 3 is a perspective view of another form of the device, showing the position of the single spacer block as secured to the plate for engagement between a box and the adjacent wall of a railroad car.

Figure 4 is a perspective view of the form of the device illustrated by Fig. 3, but showing the position of the single spacer block as secured to the plate for engagement between adjacent boxes of the load.

Figure 5 is a fragmentary, transverse elevation of a box load in a railroad car, the load including the form of the device shown in Figs. 1–4 inclusive; the boxes extending, in length, transversely of the car.

Figure 6 is a fragmentary transverse elevation of a box load in a railroad car, the load including only the form of the device shown in Figs. 3 and 4; the boxes extending, in length, transversely of the car.

Referring now more particularly to the characters of reference marked on the drawings, and at present to the embodiment of Figs. 1, 2, and 5, this form of the invention comprises two spacer assemblies; one for use between boxes and the car wall (see Fig. 1), and another for use between adjacent boxes (see Fig. 2).

The spaced assembly of Fig. 1, hereinafter termed an end spacer unit and indicated generally at E, is made up of a flat wooden plate 1 of rectangular configuration and of such thickness to impart rigidity thereto.

A pair of elongated, parallel sided spaced blocks 2 and 3 of wood are disposed on end against and project from opposite faces of plate 1. One side of blocks 2 and 3 is flush with an edge 4 of plate 1, and said blocks are offset relative to each other lengthwise of said edge 4 whereby to permit of the driving of a securing nail 5 from the other face of the plate substantially centrally into each block.

The spacer assembly of Fig. 2, hereinafter termed an intermediate spacer unit and indicated generally at I, likewise comprises a flat wooden plate 6 and blocks 7 and 8, all corresponding in size and shape to plate 1 and blocks 2 and 3 respectively. The blocks 7 and 8 are disposed centrally between opposite edges 9 and 10 of plate 6 with corresponding faces of the blocks parallel to each other and to the edges of the plate. The blocks 7 and 8 are offset as in Fig. 1 and are each secured by a nail 11.

The spacer assemblies of Figs. 3 and 4 are end

and intermediate spacer units corresponding respectively to those shown in Figs. 1 and 2, but include only a single projecting spacer block. The end spacer unit shown in Fig. 3 comprises a plate 1*a* and a single block 3*a* which projects from one face of the plate flush with and centrally between the ends of an edge 4*a* of said plate. The intermediate spacer unit shown in Fig. 4 comprises a plate 6*a* having a single block 8*a* projecting centrally from one face thereof with the sides of the block parallel to the edges of the plate. As in Figs. 1 and 2, the blocks are here each secured by one nail driven through the plate and substantially centrally of the block.

Fig. 5 illustrates the combined use of the spacer units of Figs. 1–4 inclusive to space a load of like-size boxes in a railroad car.

The car, indicated generally at 12, includes side walls 13 between which the load is stacked; the load comprising a plurality of stacks of boxes B disposed in transversely spaced rows R which extend lengthwise of the car, corresponding boxes in adjacent rows being disposed in symmetrical relation to each other. In the present instance the boxes extend in length transversely of the car, but may extend lengthwise thereof. However, in either event the spacer units are similarly used, and which in Fig. 5 is as follows:

A plurality of end spacer units, as per Fig. 1, are disposed between each stack of boxes B in the rows adjacent walls 13; the plates 1 of said units resting on the adjacent end cleat C of every other box and supporting the corresponding end portion of the immediate uppermost box except at the top tier, where a single-block end spacer unit, as per Fig. 3, is employed. The blocks 2, 3, and 3*a* of the end spacer units, as above, snugly engage between the car wall and corresponding box ends, maintaining proper spacing therebetween for adequate air circulation.

A plurality of intermediate spacer units, as per Fig. 2, are disposed between adjacent stacks of boxes B in the rows R; the plates 6 of said intermediate spacer units resting on and forming a bridge between the adjacent end cleats C of every other box in said adjacent stacks, and supporting the corresponding end portions of the immediate uppermost boxes in said stacks except at the top tier where a single block, intermediate spacer unit, as per Fig. 4, is employed.

The blocks 7, 8 and 8*a* of the above intermediate spacer units are closely engaged between adjacent and corresponding box ends, spacing the same for air circulation while at the same time preventing lengthwise shifting of said boxes.

Both the end and intermediate spacer units are located, relative to corresponding boxes, centrally between the sides of the latter, which assures of stability of the stacks; the sides of the boxes in adjacent stacks engaging each other.

The blocks of the spacer units are of such dimensions transversely of the car to normally produce a tight load in such direction, but if any looseness should exist when the load is made up, the blocks, which are initially of a greater dimension lengthwise of the car than transversely thereof, may be turned 90° relative to the plate, and about the centrally driven nails, so as to engage the largest dimension of said blocks in box spacing relation.

The end and intermediate spacer units of Figs. 3 and 4 respectively may comprise the sole spacing means employed in the load, as shown in Fig. 6. In this case, spacing units—both end and intermediate—are used for each tier rather than for alternate tiers, as the units each include only a single projecting block; such single block depending from the plate of each unit.

From the foregoing description it will be readily seen that I have produced such a device as substantially fulfills the objects of the invention as set forth herein.

While this specification sets forth in detail the present and preferred construction of the device, still in practice such deviations from such detail may be resorted to as do not form a departure from the spirit of the invention, as defined by the appended claims.

Having thus described my invention, what I claim as new and useful and desire to secure by Letters Patent is:

1. A spacer for placement between two boxes disposed with their ends adjacent each other, such spacer consisting of a relatively small plate adapted to be placed on the tops of the adjacent ends only of the boxes and bridge the space between said boxes, an elongated rectangular spacer block having an end disposed against one face of the plate, and a nail extending through the plate and into the block to hold the two together; the block being adapted to project between the boxes and hold them spaced apart and a like block disposed against the opposite face of the plate but displaced laterally with respect to the first named block whereby each block may be nailed to the plate without interference from the other; the second block being adapted to project between two boxes superimposed on the first two boxes.

2. A spacer for placement between a vertical wall and a box spaced from the wall, such spacer consisting of a relatively small plate adapted to be placed on the top of the end only of the box adjacent the wall and project to a point adjacent the wall, an elongated rectangular spacer block having an end disposed against one face of the plate, a nail extending through the plate and into the block to hold the two together, one face only of the block being flush with the edge of the plate which is to be placed adjacent the wall; the block being adapted to project between the wall and box and hold the box in spaced relation to the wall, the block being oblong in cross section whereby it may be turned on the nail to adapt it to fit in different sized spaces between the wall and box.

HENRY J. GOFF.

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