

BUREAU OF EXPLOSIVES
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ILLUSTRATING

Approved Method of Loading Carload Shipments
of Gasoline in "Blitz Cans"



5 GALLON "BLITZ CAN"

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LOADING "BLITZ CANS"

Due to serious difficulty in securing a satisfactory load for the so-called "Blitz Cans" used by United States Government Departments for the shipment of gasoline, a need for definite instructions for the loading of these containers was indicated. The following describes an approved method which was developed to accomplish their loading:

1. SELECTION OF CAR:

a. All cars to be loaded must have sound roofs, floors, sides and walls and must be carefully cleaned, taking particular care to pull out all projecting nails or other metal objects which would puncture cans or cause sparks if the cans moved over same. If car is equipped with an unlined corrugated end, a temporary end bulkhead must be constructed and installed in place (See Figure No. 1) to present a smooth surface against which the containers are to be loaded. If car has bowed ends, horizontal cross strips must be nailed across the ends of the car to present an even vertical surface at right angles to the floor of the car, so that when loaded the ends of the cans in the first stack are in an even vertical plane.

b. Cars having end doors must not be used.

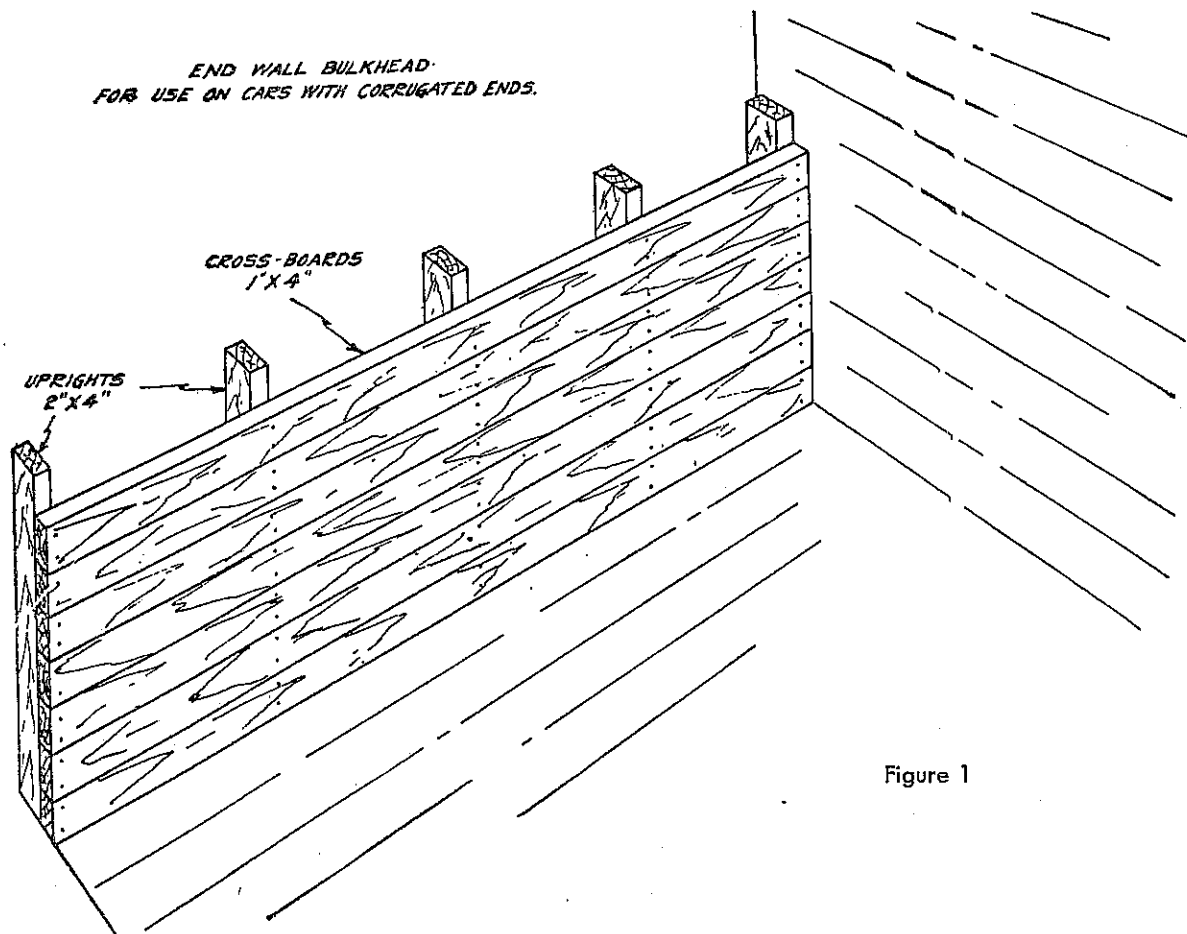


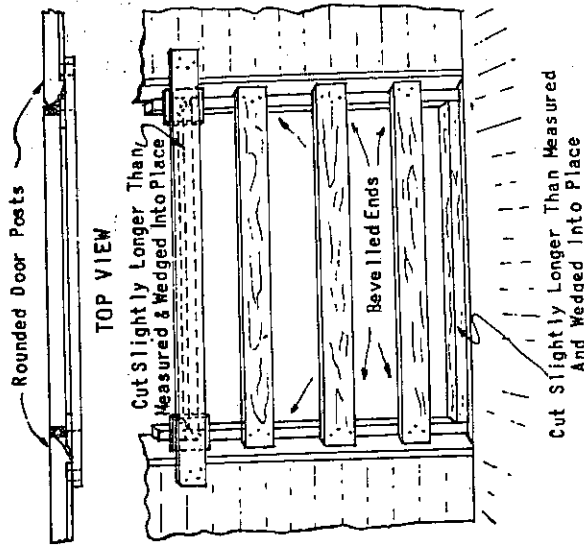
Figure 1

2. DOORWAY PROTECTION:

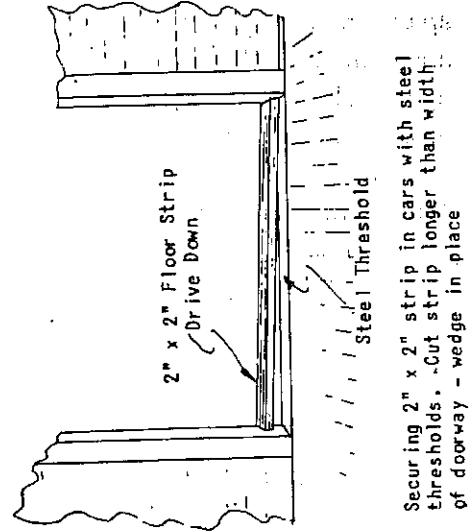
a. Single-Door Cars: Doorways must be protected with wooden gates flush with the inside lining of the car to the height of the load (See Figure 2). Doorway protection boards must be not less than 2 inches thick and not less than 6 inches in width, and of straight grained sound lumber. The number of boards must be one more than the number of layers of cans, the lowest board resting on the floor of the car, the highest board extending not more than 1 inch above the top of the upper layer and the remaining boards at the intersection of the layers, so that half of the board adjoins the top of one layer and the other half of the board adjoins the bottom of the next layer of cans.

b. Double-Door Cars: If car furnished is equipped with double doors, the unopened door on each side of the car must be protected with flush doorway boards to the height of the load in the manner described in paragraph a above.

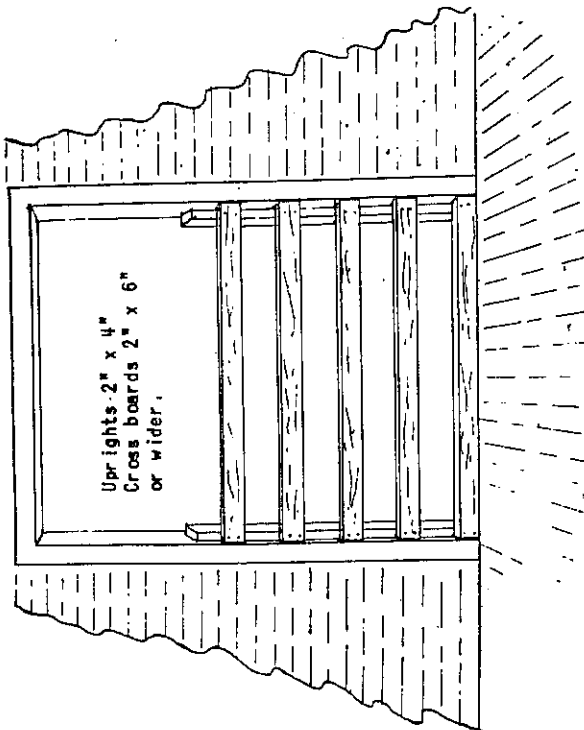
DOORWAY PROTECTION



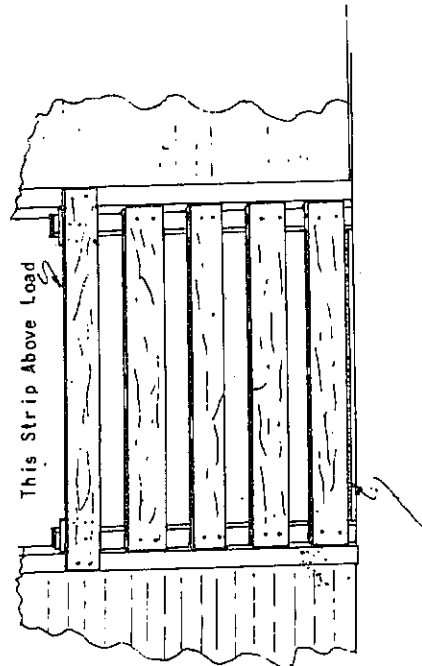
Method of applying doorway protection to cars with steel thresholds and rounded steel doorposts --
Size of material to depend on weight and pressure of load



Securing 2" x 2" strip in cars with steel thresholds. Cut strip longer than width of doorway - wedge in place



Doorway protection in cars, wood door posts.



2" x 2" Floor strip on threshold
Doorway protection in cars, steel door posts.

Figure 2

3. STOWING IN CAR:

a. The full gasoline cans must be so loaded that they will be in an upright position in the car and in straight rows lengthwise with the car, as illustrated in Figures 4, 4(a) or 4(b). The method shown in plan view Figure 4(a) should be used except in cases where the lugs on closures of cans extend beyond the edge of the can. When this latter condition prevails, cans must be placed in position indicated in plan view of Figure 4(b). The openings of the cans must be alternated or staggered in any one stack across the car. As the loading progresses from each end towards the doorway, each stack across the car must be stowed tightly and evenly against the preceding stack in order to keep the lengthwise slack in the load to an absolute minimum and to provide an even, vertical surface against which bulkheads are to be applied.

b. When the cans do not completely fill the crosswise space in the car, and the unoccupied space is 2 inches or less, load the cans tightly against each sidewall and stagger the slack space in each layer along the center line of the load (See Figure 4). When the unoccupied space is more than 2 inches, construct a light bulkhead along one car wall to fill the unoccupied space (See Figure 3). These bulkheads should be slightly shorter than one-fourth inside length of the car to permit application of double-faced bulkhead described in paragraph d following.

c. Only four layers of cans may be loaded in any one car and dunnage boards not less than 1 inch, in thickness, must be placed across the car between the first and second layer of cans when load consists of four layers (Not required for loads of three layers or less).

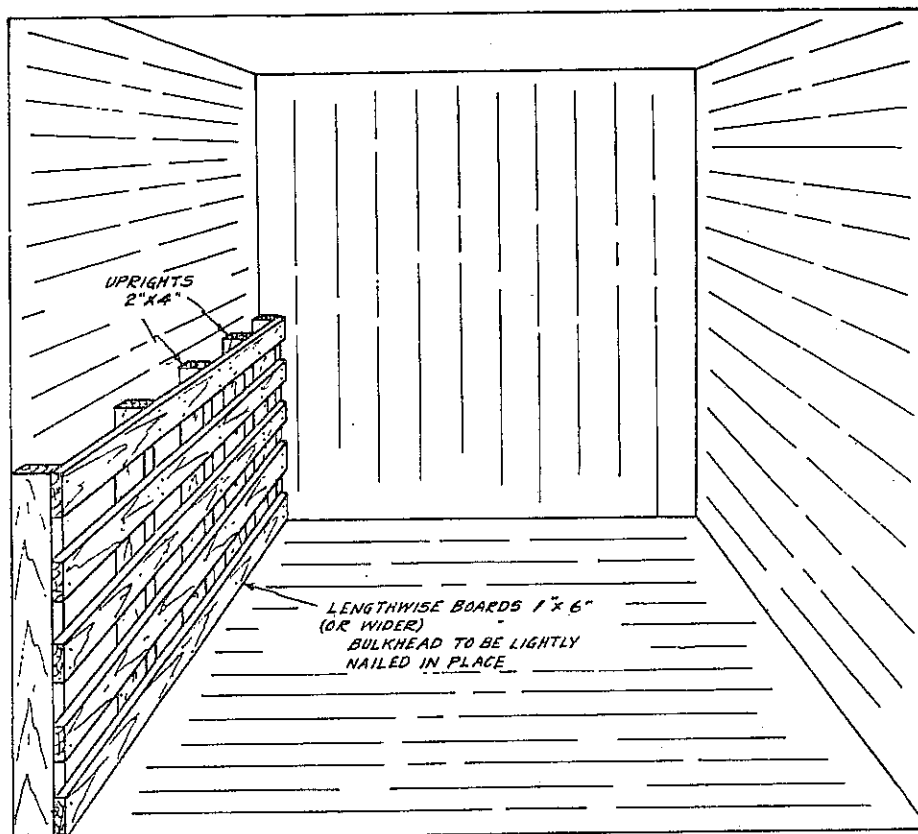


Figure 3—Side wall Bulkhead for use when Crosswise Slack exceeds 2 inches

DISTRIBUTION OF SIDEWISE
SLACK OF 2" OR LESS.

WHERE CROSSWISE SLACK
EXCEEDS 2" SEE FIG. - 3

1" DECKING-Between
First and Second
Layers Only. of
4 Layer Loads. (None
required on loads
of three layers, or
less).

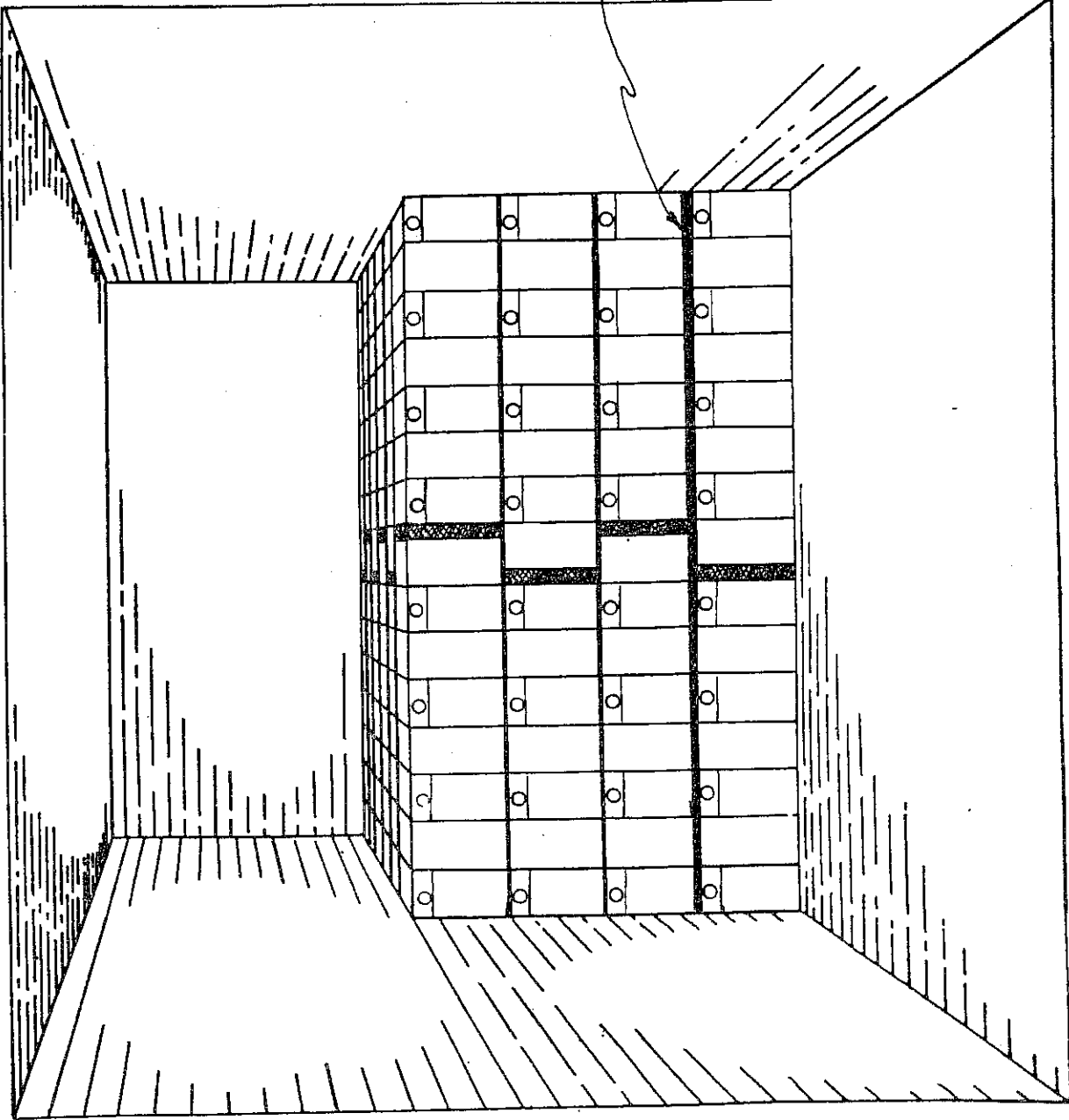


Figure 4

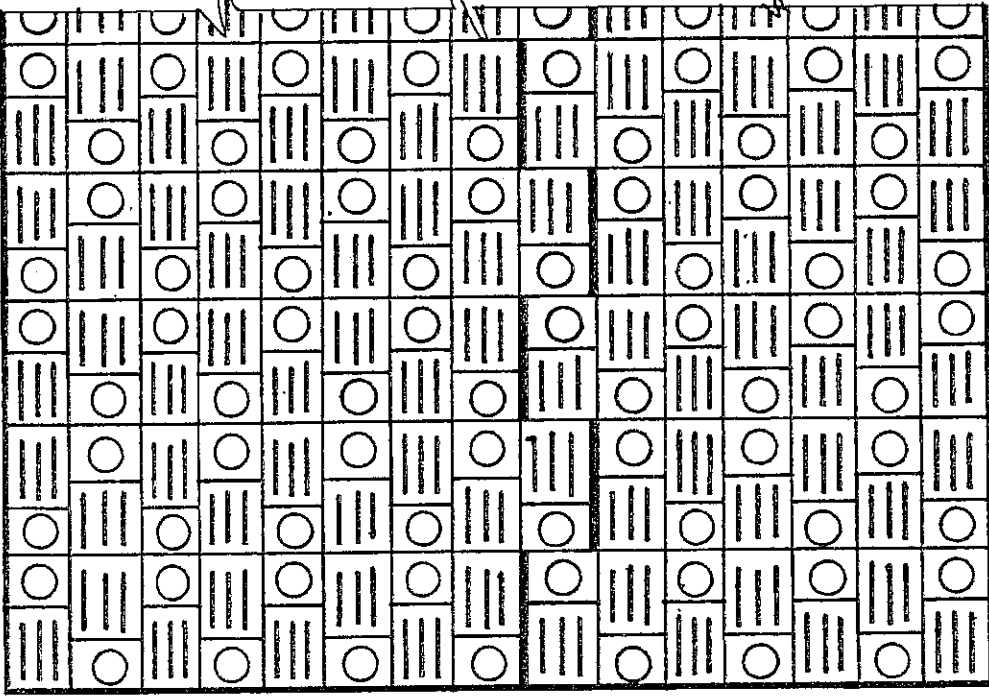


Figure 4b

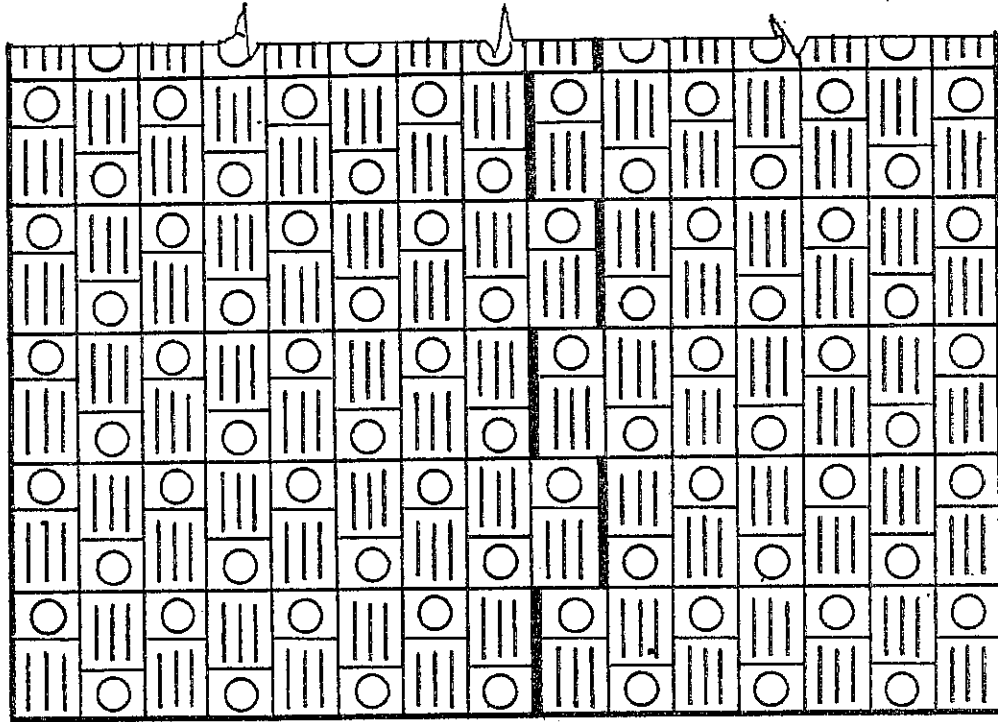


Figure 4a

PLAN VIEWS

d. Space the car floor into four units and use an intermediate double-faced bulkhead at one quarter of the length of the car from each end (See Figure No. 5). As the loading in each unit is finished, install a bulkhead or gate and nail it effectively to the sides of the car and brace it at top by back-up cleats nailed to uprights in car walls. The intermediate bulkheads should be constructed of four 2 x 4 uprights, evenly spaced, and five 1 x 10 cross boards spaced and nailed to the narrow edge of the 2 x 4's on each side, so the upper 1 x 10's will extend not more than 1 inch above the top of the cans in the upper layers and the lower 1 x 10's will rest on the floor of the car and the remaining 1 x 10's will bridge the intersections of the layers. These bulkheads should be partly made outside of the car with crossboards on one side and, after this side is installed against the unit in the car and the end 2 x 4's nailed and braced to the sides of the car, the crossboards for the other side can be applied and the loading of the next unit started.

e. The load must be divided at the doorway of the car, the space being taken up by a floating center gate (See Figure 6). This center gate, when completed, must not be nailed or blocked to the car floor or walls. Construct the two sides of the gate outside the car, spacing the crosswise boards (A) so that the bottom board will be flush with the car floor, the top board extending not more than 1 inch above the top of the cans in the top layer, and the intermediate

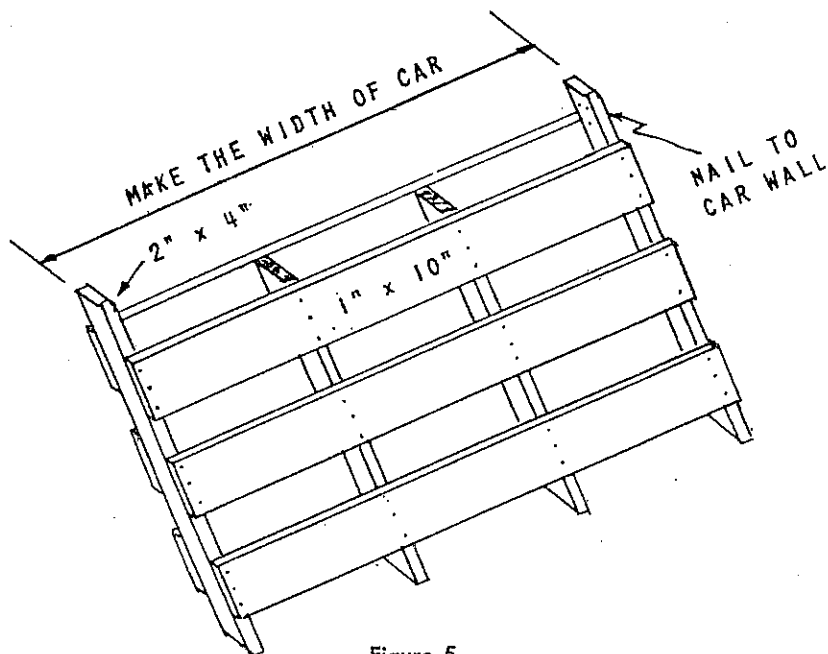
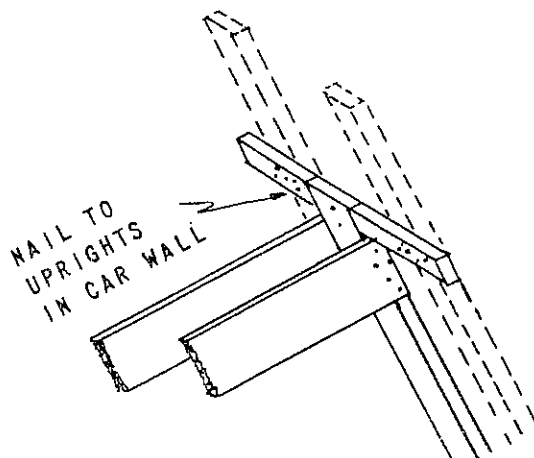


Figure 5



crosswise boards opposite the junction of all layers. Place the two sides of the gate in position against the load in the ends of the car and cut the stretchers (C) approximately 1 inch longer than the measured space between the gates. Drive these spreaders down into place, the floor spreaders first, the intermediates next and the top spreaders last. Provide two uprights (E), each capped with a short 2 x 4 block. Nail one of these uprights to the horizontals on each side of the gate after it is completed and in position so that the top of the block will be approximately 1 inch below the ceiling or roof of the car.

NOTE: Thickness and widths of lumber given herein are nominal measurement. Actual size will be the nearest commercial standard.

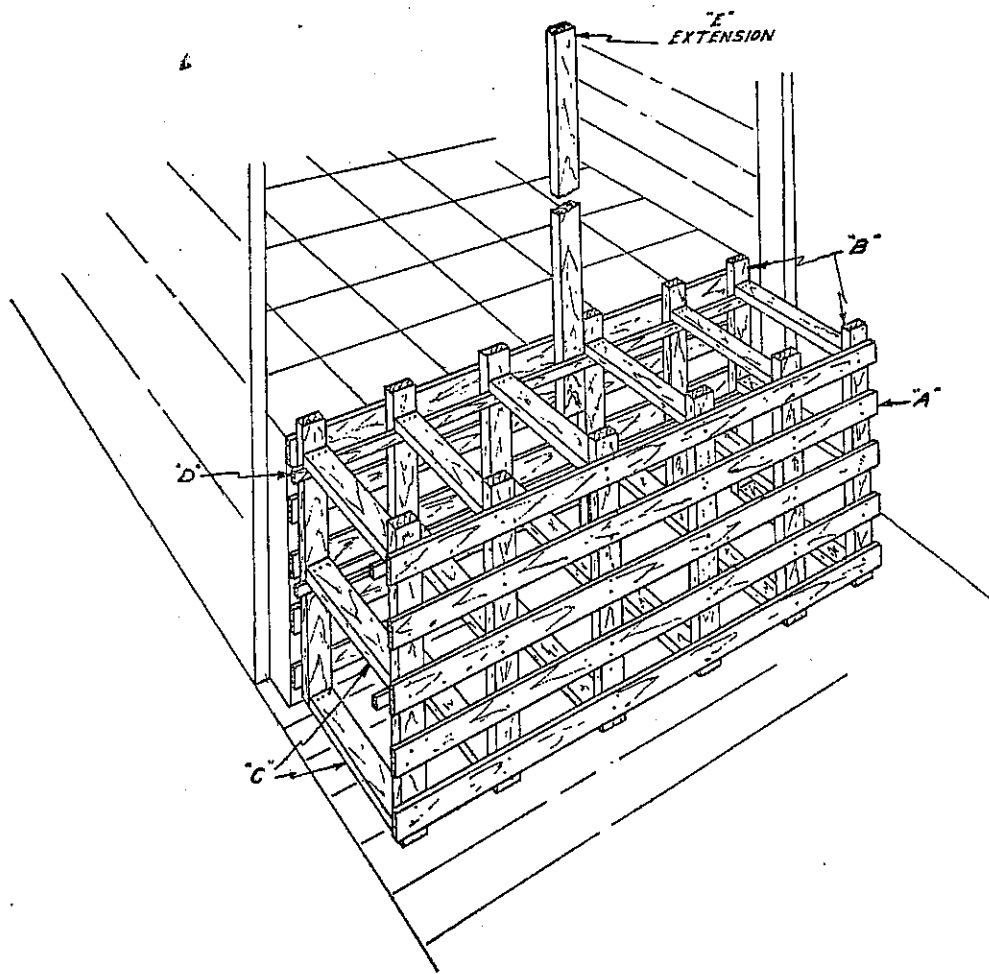


Figure 6