How Automobiles Should Be Loaded in the Car*

Proper Blocking and Bracing in Cars, with Good Decking and Lining, Essential—Methods Illustrated

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IN A PAPER OF THIS KIND, it is difficult to give complete details of automobile loading for the reason that various methods are employed at the different automobile plants. Fig. 1 illustrates the metal block now being used by some of the automobile companies and shows the double headed nail which is being advocated for use by all shippers for any class of lading which requires nailing to the floor of the

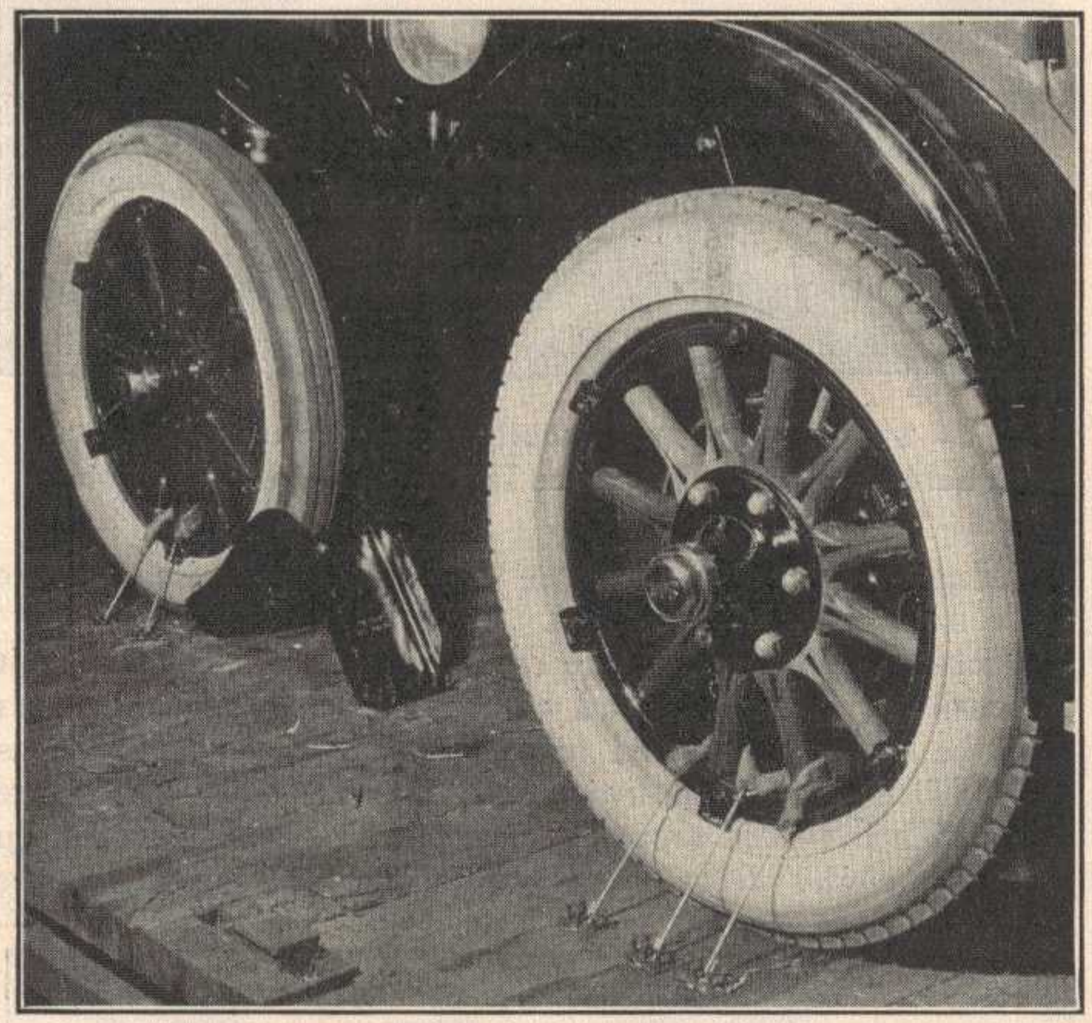

Fig. 1—Improved Method of Securing Wheels So They Will Not Move

car. The benefit derived from the use of these nails is that they can be removed without damage to the car. Before these were used the common nail was driven into the floor so that it was necessary to take a pick axe in order to remove them. This resulted in considerable damage to the decking.

A double decked load of automobiles in one end of a double sheathed automobile car is shown in Fig. 2. Particular attention is directed to the fact that the tops have been removed from these cars, and to the wood bracing which is placed in the most approved manner, the main object being to prevent shifting. This also illustrates why cars having inside lining should be in good condition. The automobile that is on the top tier is the same size as the one on the floor and proper blocking must be depended upon to secure an even footing. This illustration also clearly indicates why cars which have been loaded with cement, lime, fertilizer, etc., cannot be used, as no covering is placed around the automobiles. When using a single sheathed automobile car additional bracing has to be applied to the sides of the car which is not necessary in a double sheathed car.

The common method of loading automobiles on flat cars is shown in Fig. 3. The two large wooden frames shown in the illustration are not left on the car but are used to hoist the cars in the top tier, which are then placed on the metal combination bracket and bracing. Automobiles loaded on a flat car depend entirely on the security of the decking for support. Therefore, a flat car with loose decking is not fit to be loaded with this commodity. The theory of loading automobiles properly in house cars is to block them so they cannot shift, that is, to have the blocking absolutely rigid. This is also true of flat cars as in the event the loading is not properly secured it will be quite impossible to take them to their destination without damage.

Fig. 4 illustrates how one automobile is loaded when only five automobiles can be loaded in one car, two being placed on the floor, two above them and one at the end. Automobiles are loaded in gondola cars in the same manner as when loaded in automobile cars. The side view of automobiles loaded in a gondola where one of the automobiles is loaded

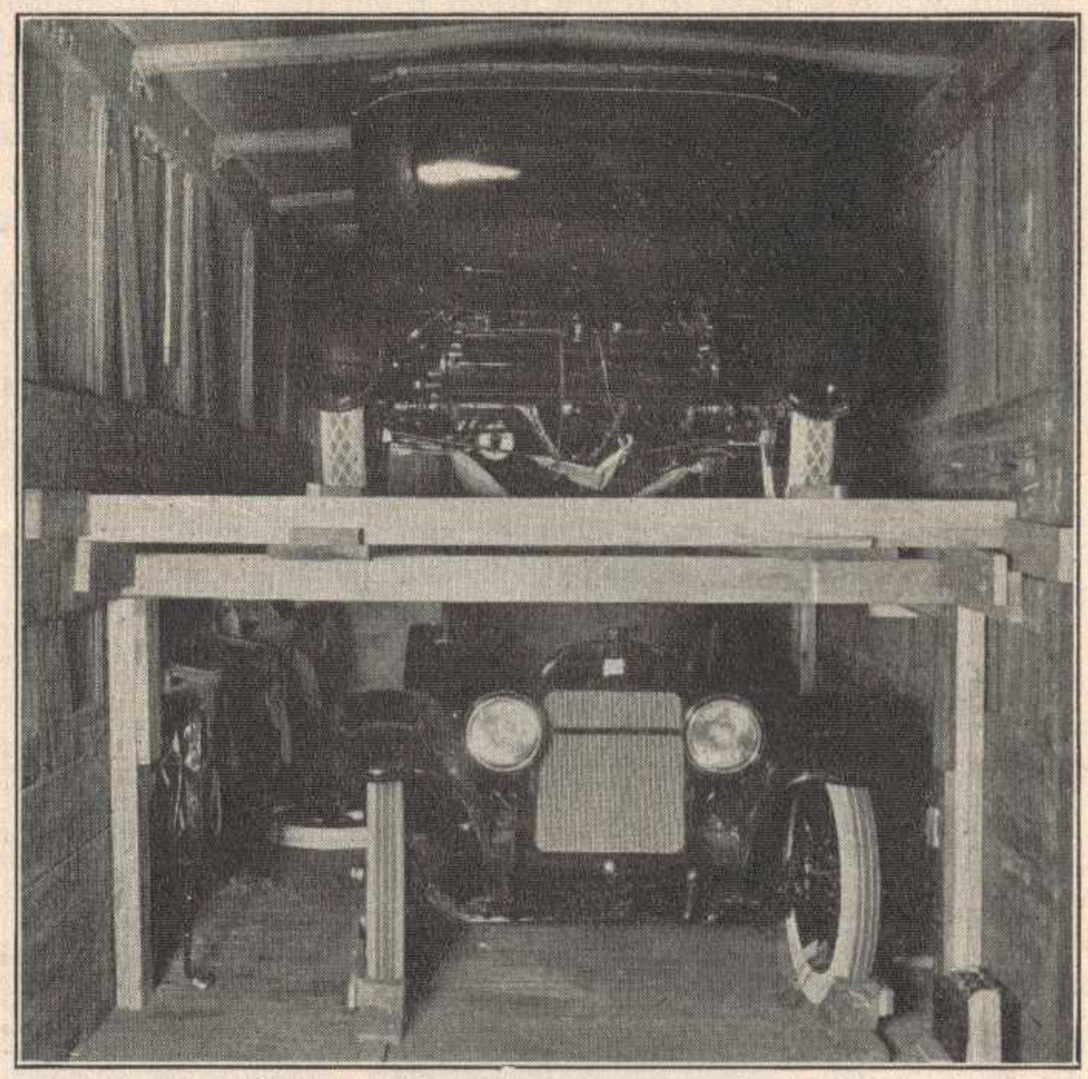

Fig. 2—Method of Bracing a Double Deck Load of Automobiles in a Double Sheathed House Car

above the other is shown in Fig. 5. One end of the car is above the other car and one is on the floor.

How Longitudinal Plank Can Be Used in Automobile Cars

The question has been brought up relative to the idea of placing longitudinal plank throughout the length of automobile cars. The thought is that this would be beneficial in cases where the blocking is spiked to the deck as it would avoid the destruction of decking when using ordinary nails. It has not been found possible, however, to do this. As a general rule automobile concerns do not run cars into the

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car on their own tires but instead use the truck illustrated in Fig. 6. For this reason they find that the longitudinal plank would be objectionable. It has been suggested, however, that this feature might be avoided and the longitudinal planks used if bolted to the floor and properly spaced to take care of blocking when loading the machines. These planks

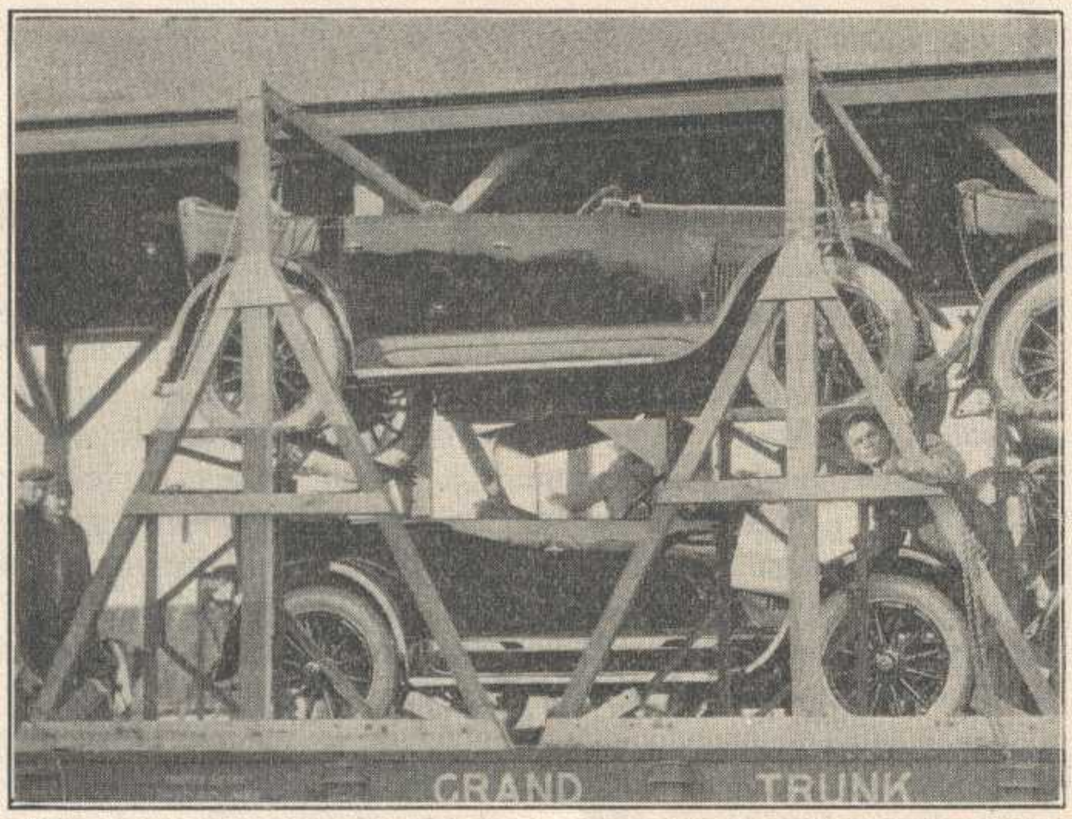


Fig. 3—Common Method of Loading Automobiles on Flat Cars

should be placed flush with the decking and arranged so that it would be easy to renew them when they were damaged to such an extent that repairs were necessary. This would result in less expense in maintaining automobile cars as it would only be necessary to renew the planking and not the entire decking.

Automobiles for export are prepared at the plant in suitable

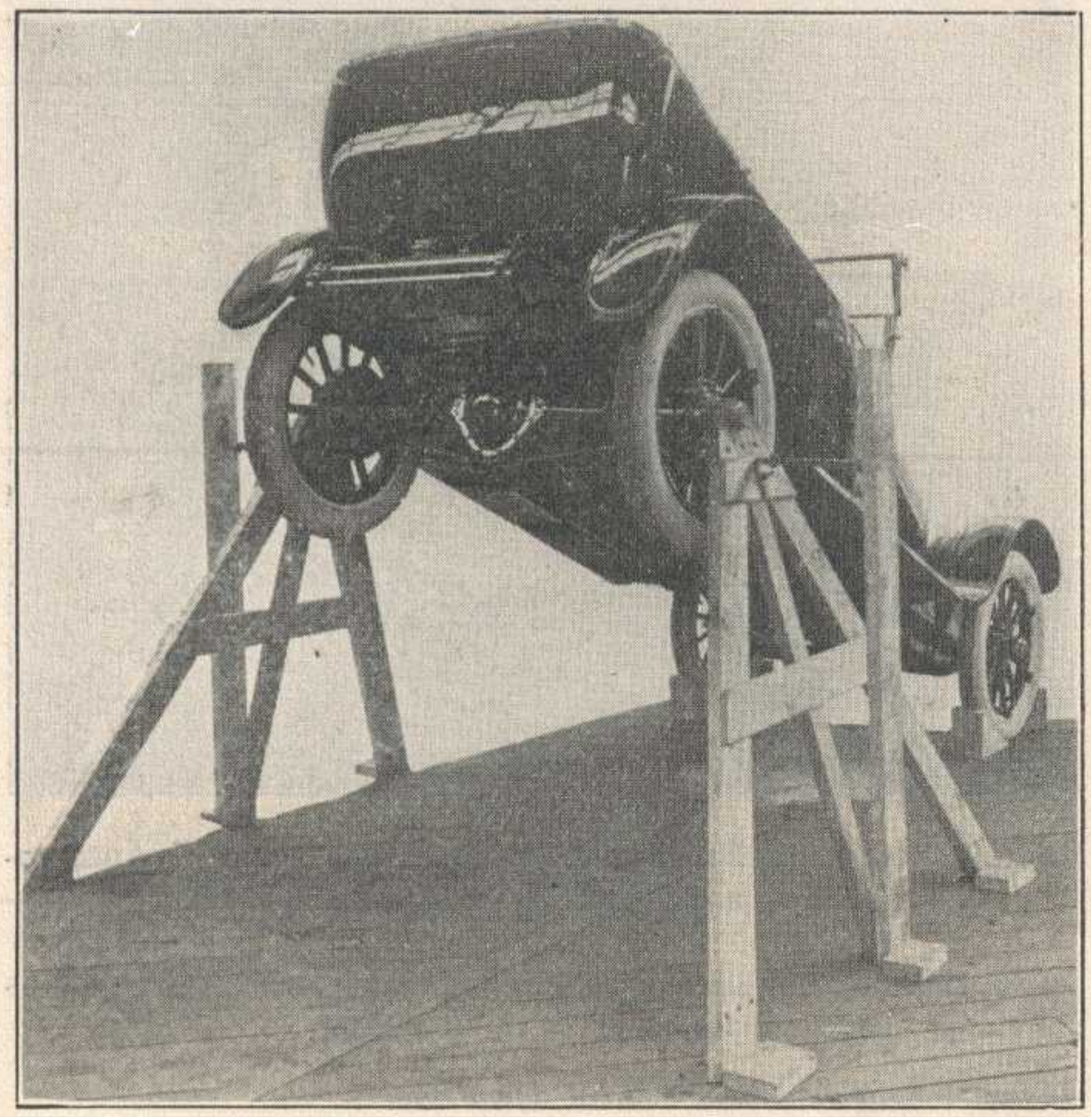


Fig. 4—How the Automobile at One End of the Car is Loaded when Five Machines Are Loaded in One Car

cases for shipment on boats. These cases are prepared with much care and are designed to take up the smallest possible space. The interior is covered with a water proof material to protect them from the weather when shipped on flat cars. When loaded they are packed in these cases and are braced according to the A. R. A. loading rules for this class of loading. Ordinary shifting, it has been found, does not damage the lading, but when found shifted the cases should be replaced to their original position on the car and the

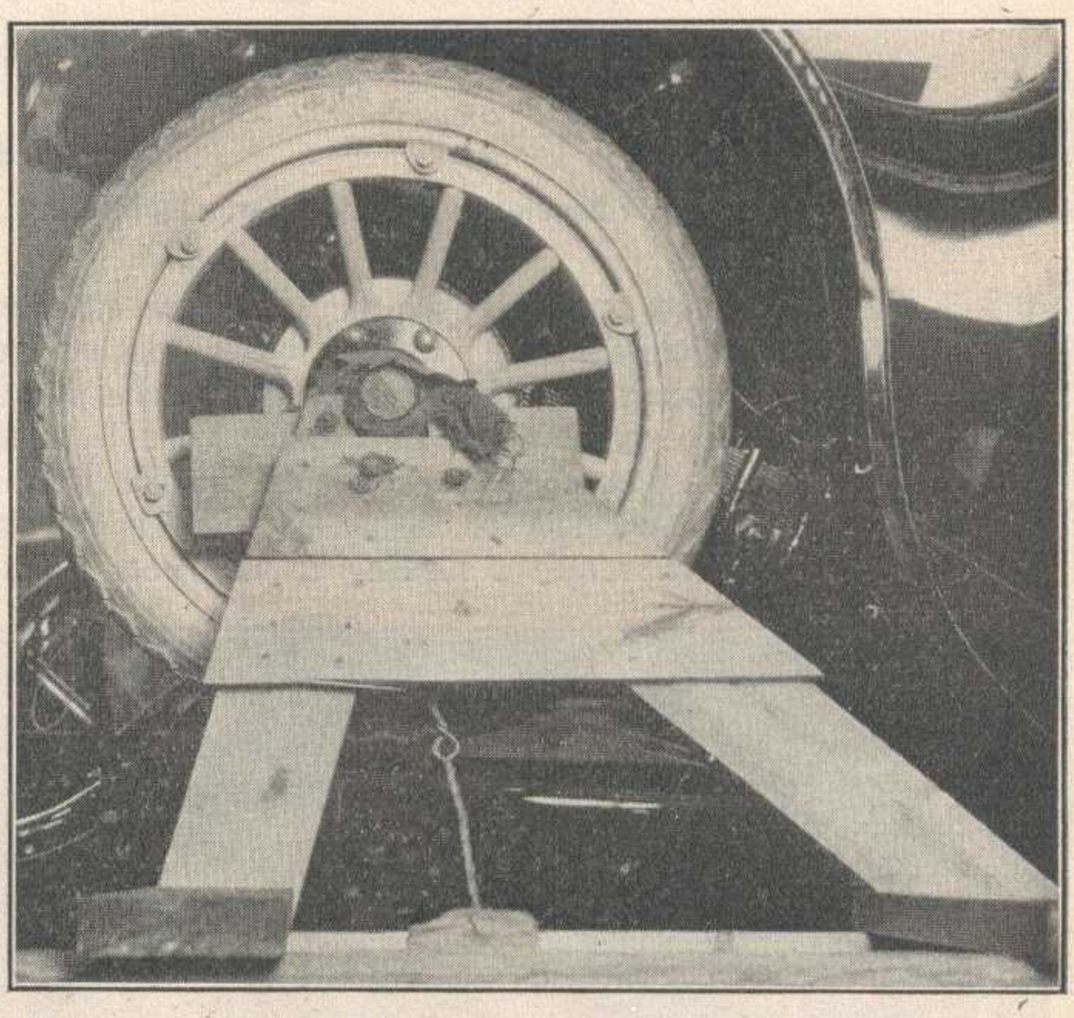


Fig. 5—Side View of Automobiles Loaded in a Gondola Car Where One of the Machines Is Loaded Above the Other

blocking secured. Great care should be exercised not to drive nails through the boxes.

Decking in all automobile cars should be secure before it is possible properly to load and block automobiles. Boxes must be securely fastened to the floor to keep the contents from shifting both lengthwise and sidewise. The metal wire clip which is placed around one spoke of the wheel will keep the automobiles from running up and climbing over the

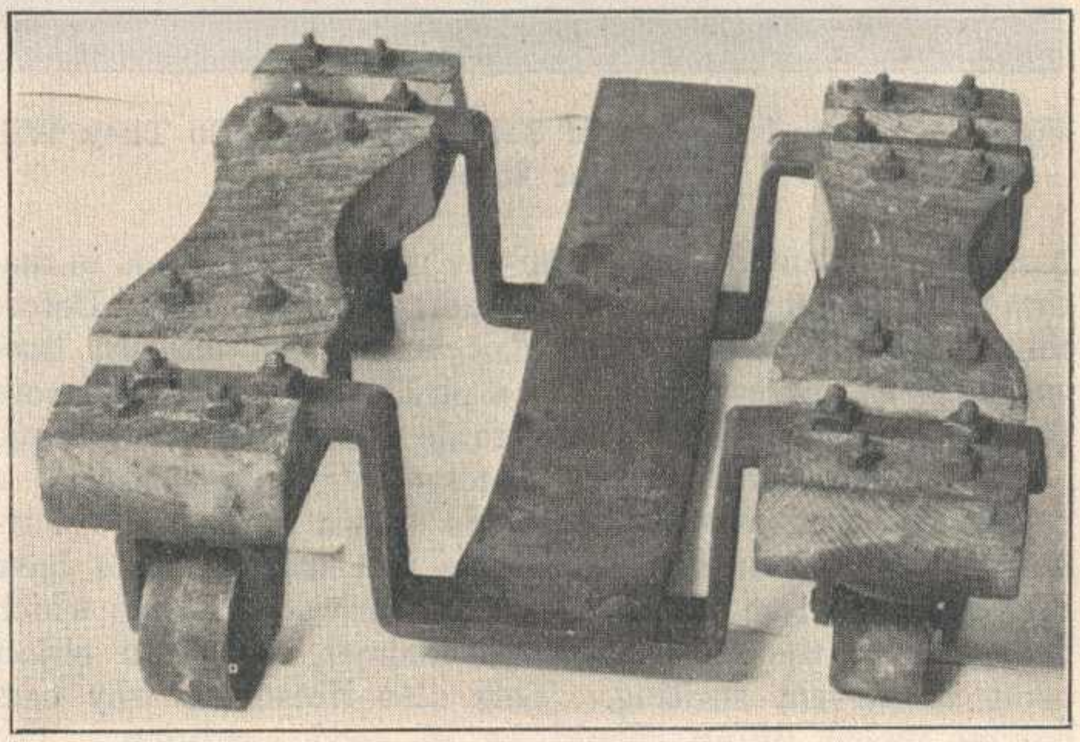


Fig. 6—Dolly or Truck Used to Move Automobiles Into the Car

wheel blocking. This also depends upon a well secured floor.

Whenever a car loaded with automobiles is derailed the lading should be carefully examined. If this is done and the bracing put in the proper position it will save the carriers money and claims. When blocking is found shifted it should be the practice for all roads to place it back in its original position which is clearly shown by the marks left on the interior of the car. In replacing this blocking it should be replaced in kind. If a brace cut in a certain way

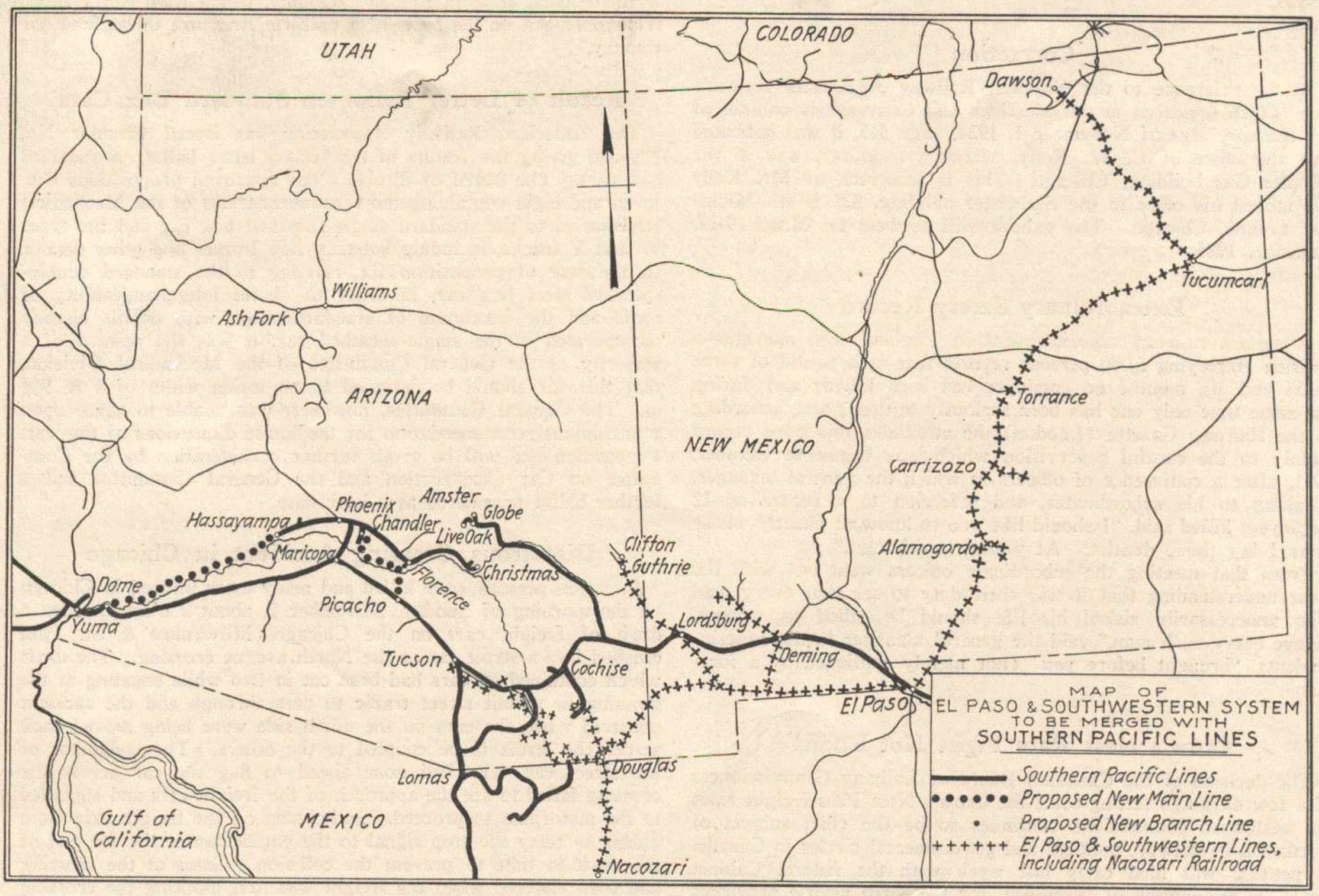
has been broken a new brace cut in exactly the same way should be applied. This is equally true of blocking. If these items are not replaced in kind there is a splendid opportunity for the load to shift and damage the lading.

In conclusion, the proper inspection of automobile blocking throughout the movement of the shipment should be made with the idea that when found loose the necessary repairs may be made. The blocking should not be forced when loose in order to replace it but instead should be placed tight and secured. If the blocking is forced the lading is liable to be damaged. When the automobiles are loaded blocking is designed to allow for some play. When the blocks are placed to hold the wheels the tires are inflated. If the air leaks out of the tires while in transit they should be inflated rather than the blocking reset.

After analyzing the different features in connection with the loading of automobiles it will be noted that the necessity of a good car with good decking and lining is very important. If other than first class cars are used, the roads will be subject to claims for damaged automobiles. We should, insofar as possible, exert every effort in having our inspection forces carefully inspect all cars to be furnished for this commodity. A careful inspection, using cars with good decking and lining and proper blocking and bracing will do more than anything else to cut down the claims on automobiles damaged in transit.

BUFFALO MEAT has been featured on the menu cards of the Northern Pacific during the past few days. The meat comes from the Montana National Bison Range which was established near Ravalli, Mont., on October 17, 1909.

THE PERE MARQUETTE opened its new yards between Toledo, Mich., and Erie on October 30. These yards have a storage capacity of 5,000 cars, and are expected to eliminate congestion at Toledo during the winter months when traffic is heaviest.



Map Showing Lines Which Southern Pacific will Build in Connection with El Paso & Southwestern Acquisition

New lines proposed are from Chandler, Ariz., to Picacho, 50 miles, with a branch to Florence, 7 miles, and from Hassayampa to Dome, 115 miles. In addition to the construction of 165 miles of new main line and 7 miles of branch line, road will be improved from Chandler through Phoenix to Hassayampa, 63 miles. The estimated cost is $12,752,000 for new construction; $1,386,000 for improving existing line, a total of $14,138,000. Work is to be completed before December 31, 1926.

The construction of the new mileage will put Phoenix on a through Southern Pacific main line, and will supply additional transportation facilities for Phoenix and territory nearby, notably the growing agricultural districts of the Salt River valley. Branch to Florence will shorten distance from Magma and the Ray-Hayden mining district to eastern points.

In connection with the acquisition of the El Paso & Southwestern, the construction of the new mileage will give the Southern Pacific a double-track main-line or rather two main lines between Yuma, Ariz., and El Paso, Tex., except between Picacho and Tucson, 40 miles, and between Wendon and Dome, 15 miles.

Traffic between Tucson and El Paso has reached such proportions as to have made double-tracking of line an urgent necessity in the near future. Use of El Paso & Southwestern rails as additional main-line is expected to obviate necessity for such double-tracking, and thereby result in total saving of $3,430,950 annually, divided $662,000 resulting from better balancing of traffic; $1,487,860 saving in administration and operating expenses under unified operations, and $1,954,100 in capital and maintenance charges through avoidance of double-tracking.

See article "Hearing on Southern Pacific, E. P. & S. W. Merger," *Railway Age* of September 13, 1924, page 457, and article "Control of E. P. & S. W., by S. P., Authorized," *Railway Age* of October 4, page 611.