THE RAILWAY AND MARINE WORLD.

be not less than six pairs of stakes for total length of load. The ends of poles



Figs. 15A-D—Loading of Logs, Piling, Props and Telegraph Poles in Two Piles on Flat and Low Gondola Cars.

must extend not less than 18 ins. beyond the centre stake.

81.-Some suggestions have RULE been made with reference to handling twin loads of flexible material where the shipment is light and can be handled safely without the use of blocking pre-scribed for full loads, and in order to make this entirely clear, the following paragraphs should be added to this rule:

If the total weight per bolster, "81-A. figs. 32 and 33, does not exceed 10,000 lbs., the centre post and bolster cross braces may be omitted, provided the bearing piece is not less than $8 \ge 10$

ins. "81-B. For twin loads of plates with two bearing pieces and two or four slid-ing pieces, if the total weight does not exceed 20,000 lbs, or 10,000 lbs, per bear-ing piece, the centre post and bolster cross braces may be omitted, providing the bearing pieces are not less than by 10 ins. "81-C.

For loads less in weight than those specified in paragraphs A and B, the dimensions of bearing pieces may be proportionately reduced as per rule 29."

proportionately reduced as per rule 29." RULE 98 A.—Add the word "cars" af-ter the word "hoppers" in the first line last paragraph, which would make this paragraph read as follows:—"When hopper cars or self-cleaning hopper cars are selected the doors must be securely boarded over as per fig. 45-D." RULE 103.—In order to bring the weight of the lading nearer to the al

weight of the lading nearer to the al-lowable limit for double and triple loads, the following paragraph should be added to provide that girders, either of the solid or latticed type, ranging from 10,-

000 to 30,000 lbs, each in weight, shall be so arranged that two or more can be be so arranged that two or more can be loaded side by side on pivoted bolsters: ---"Two or more girders may be loaded vertically, side by side, provided they are bolted together near pivoted bolsters, with proper spacing pieces between them, in such a manner that they act as one girder."

FIG. 56.—It is claimed that the method of loading pipe 24 ins. or more in dia-meter on a flat car in accordance with



the present figure is wrong on account the present ngure is wrong on account of there being no provision for holding the second and top tiers of pipe from sliding off endwise. Pipe of this de-scription should be loaded with the bell ends toward the centre of car the bell ends of the second tier overlapping the first toward centre of car. There should be at least 18 ins. clearance between the bell ends of the top tier and when load-ed in this manner the end blocking is not required, therefore fig. 56 should .be changed accordingly.

RULE 121.—Due to objection on the part of shippers to the size of blocking now specified, and due also to the fact that blocking of smaller dimensions can be used without interfering with the safe movement of boiler shells and tanks this rule should be changed to read as follows:-"Lading of this description, 8 ft. or less in diameter, when loaded on sin-gle flat or gondola cars, should be sub-stantially chocked with side blocking in height equal to one-seventh the diame-ter of the shell, providing that blocking of more than 10 inches in height will not be required. End blocking to be not less than 4 ins. in height. See fig. 64-A."



Fig. 64A-Loading Boiler Shells and Tanks 8 ft. or less in Diameter.

"Lading over 8 ft. in diameter, when loaded on single flat or gondola cars with sides less than 30 ins. in height, must be substantially chocked with side blocking not less than 10 ins. in height



Fig. 64B—Loading Boiler Shells and Tanks over 8 ft. in Diameter.

and backed up by the use of stakes in the stake pockets, and in addition to this must be secured with two bands of not less than 34 in. round iron or flat bands of equal section. End blocking to be not less than 4 ins. in height. See fig. 64-B."

"When loaded in gondola cars with sides 30 ins. or over in height, the bands will be unnecessary, but precaution with reference to blocking must be taken as specified for lading 8 ft. in diameter."

"When such lading is placed upon two or more cars as a tandem shipment, it should be secured with two bands of not less than $\frac{7}{8}$ in. round iron or flat bands of equal section, in addition to the pre-scribed blocking."

"Steel tanks, lined or unlined, in sections weighing not over 2,500 lbs. per tions weighing not over 2,500 lbs. per section, 8 ft. or less in diameter, when loaded on single flat or gondola cars, must be substantially chocked on each side with blocks not less than 6 inches in height and of sufficient length and width so that they may be securely spik-ed to the floor of the car. End blocking to be not less than 4 ins. in height and of sufficient length to provide for proper bearing area against head of tank or shell, and to be securely spiked to the floor of the car. If more than 8 ft. in diameter the same side and end chockdiameter the same side and end chock-ing is to be used, and, in addition, each tank or part of tank must be secured with two bands not less than $\frac{1}{8}$ by 2 ins. in section passing over the top and properly secured to the floor or stake pockets of the car. In lieu of the bands over the top of the shell the same may over the top of the shell the same may be secured to the floor of the car or stake pockets by straps of $\frac{3}{4}$ in. round iron or equal section, bolted to the flange of the tank or shell with not less than two bolts, the lower end of the strap passing through the floor or stake pock-See fig. 64-C."



Fig. 64C—Loading Sections of Boilers. Tan or Shells over 8 ft. in Diameter, Weigh-ing less than 2,500 lbs. per Section. Tanks

The heading "Rules Governing the Loading of Mounted Wheels on Open Cars," should be inserted immediately following rule 122, and new rule 122-A should be added to the code to cover the shipment of mounted wheels on flat cars, as follows:—"122-A — Mounted wheels may be loaded on flat cars as shown by figs. 66-B and 66-C. If fig. 66-R is followed the end blocking must be is followed, the end blocking must be

End stakes of sould be and the states
Taparad blocking securád ta flaor af car Blackring & pieces hard wood net, lear than d'ia' ar lines milles s'yo

Fig. 66B-Loading Mounted Wheels on Open Cars.

not less than 8 by 8 ins. in section in one piece, or made up of two pieces of hardwood of equivalent section and secured by end stakes in addition to bolts through floor, or by separate blocking pieces secured to floor and end sill with



Fig. 66C-Loading Mounted Wheels on Open

in. bolts. In addition to this, for a ⁹/₄ in bolts. In addition to this, for a full load, five pair of wheels must be se-cured by 2 by 4 in. hardwood braces as shown, spiked to floor of car." "If fig. 66-C is followed, three pairs of wheels at either end of load are to be