

No. 612,752.

Patented Oct. 18, 1898.

S. D. S. NARBER.  
RAILROAD TIE PLATE.

(Application filed Apr. 18, 1898.)

(No Model.)

Fig. 1.

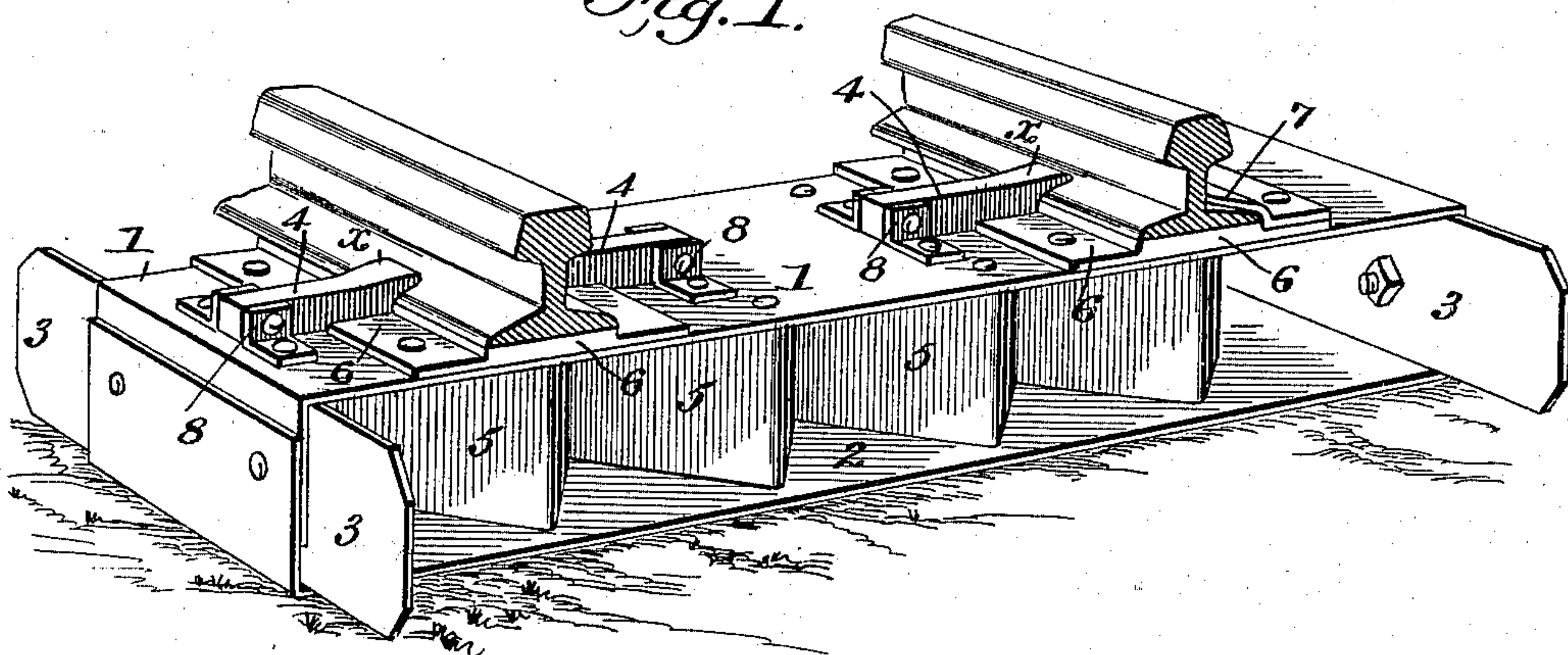


Fig. 2.

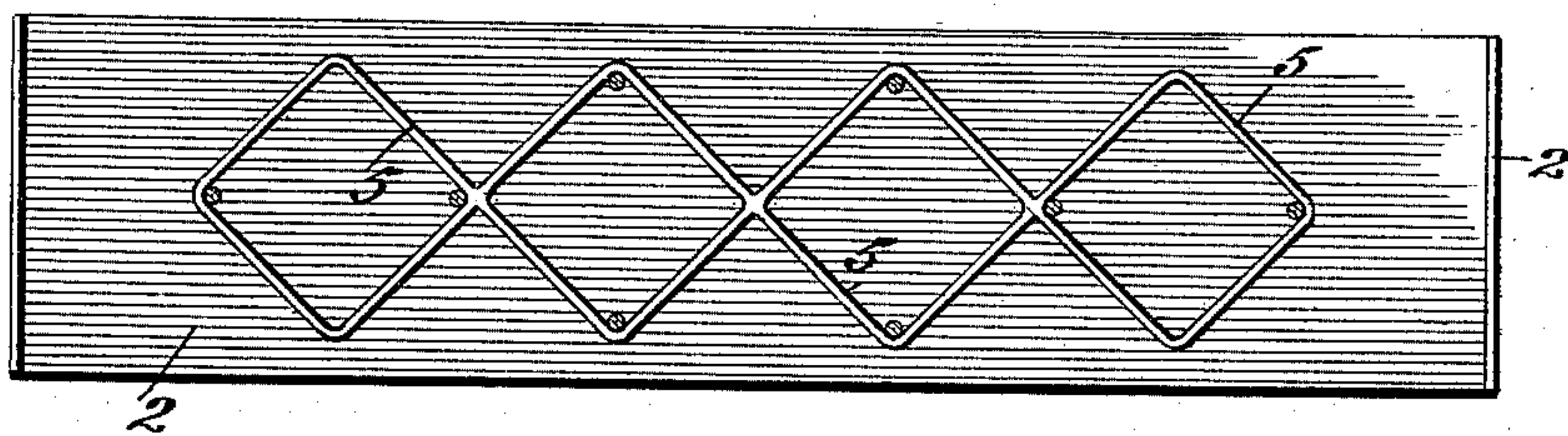
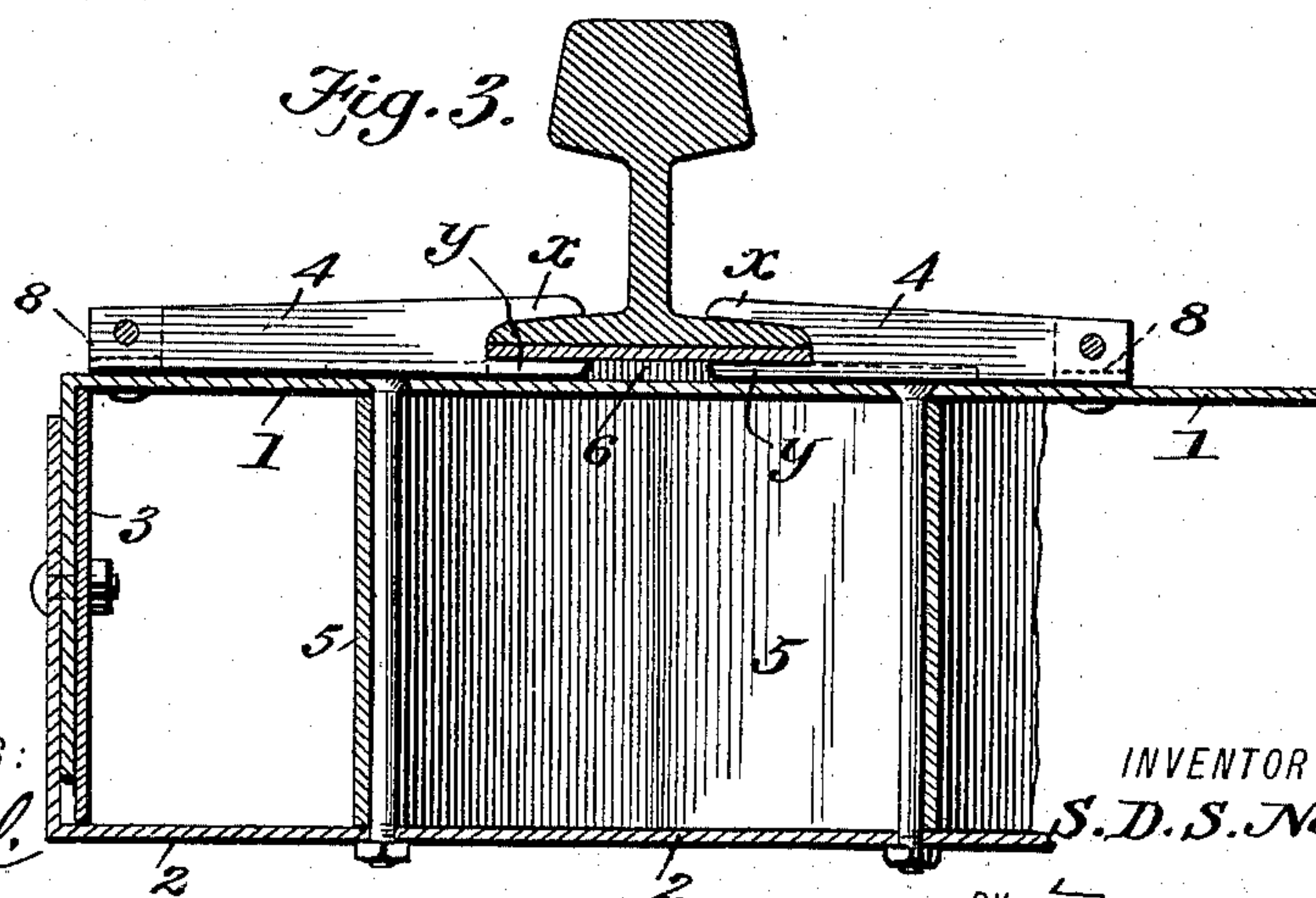


Fig. 3.



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# UNITED STATES PATENT OFFICE.

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## RAILROAD-TIE PLATE.

SPECIFICATION forming part of Letters Patent No. 612,752, dated October 18, 1898.

Application filed April 18, 1898. Serial No. 677,997. (No model.)

*To all whom it may concern:*

Be it known that I, SIMON D. S. NARBER, of Le Grand, in the county of Marshall and State of Iowa, have invented a new and useful Improvement in Railroad-Tie Plates, of which the following is a specification.

My invention is in the nature of an improvement upon the metallic railroad-tie for which Letters Patent, No. 594,419, were granted me November 30, 1897; and it consists in the improved means for fastening the rails down upon the tie in a manner at once secure and easily applied and removed, as will be hereinafter fully described.

Figure 1 is a perspective view of the railroad-tie with the tie-plate and rails applied to the same. Fig. 2 is a view of the railroad-tie with the top plate removed, and Fig. 3 is an enlarged vertical section taken through the tie-plate at right angles to the rail.

In the drawings, 1 is the top plate; 2, the bottom plate; 3 3, the end plates, and 5 the interposed series of cells or compartments forming my iron railroad-tie, as shown and described in my previous patent referred to.

Upon the top of plate 1, where the rails rest, there are disposed base-plates 6, which are thicker in the middle than at their edges and whose relatively thin edges are bolted down or otherwise secured to the top plate 1 of the tie. In the middle of each one of these plates 6, on the under side and in a line at right angles to the rail, there is a groove or channel (see Fig. 3) adapted to receive one of the branches  $y$  of the forked clamp-bolt 4, the other branch  $x$  resting above the bottom flange of the rail. The outer ends of these clamp-bolts 4 are secured firmly to the railroad-tie either by a horizontal bolt in a clip 8, fastened to the tie, as shown, or by any other convenient means. For the two rails there need be only three of these clamp-bolts 4, for a rigid overlapping flange-plate 7 is arranged at one end of the tie of the same general character as those used in my previous patent.

To remove the rails or disconnect the tie therefrom, it is only necessary to loosen the bolts in the ends of the clamp-bolts 4 and then slide these clamp-bolts longitudinally away from the rails until their forked ends  $x$  and  $y$  are disconnected from the base of the rails, and the tie may then be moved lon-

gitudinally to the right of Fig. 1, which takes the flange-plate 7 away from the rail. 55

When the rails are in place on their base-plates 6 and the latter bolted down to the tie, it will be seen that the clamp-bolts 4 lock the rail down to the base-plate by reason of the fact that one prong,  $x$ , is above the rail-flange and the other prong,  $y$ , is underneath the rigid base-plate 6. 60

In laying a track the ties, with their stationary flange-plates 7, are alternated, so that the flange-plate 7 of one tie is on one side of the track and the flange-plate 7 of the next tie is on the other side of the track, which makes a stiffer track as against lateral displacement. 65

In constructing the casing 5 with the diamond-shaped cells or compartments, I prefer to make it of malleable iron, one-half inch in thickness, and the balance of the tie is preferably made of Swedish iron one-half inch in thickness and galvanized. 70 75

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

1. A railroad-tie plate consisting of a base-plate adapted to fit underneath the rail and lying flat and solidly on top of the tie, said base-plate having a groove or recess on its under side transversely to the rail and opening at its edges; in combination with forked clamp-bolts one prong of which is adapted to lie above the tie but lock under the base-plate in said groove or recess and the other on top of the base-flange of the rail, and a fastening device at the outer end of the clamp-bolts for securing them to the tie substantially as shown and described. 80 85 90

2. A railroad-tie plate consisting of a base-plate having a relatively thick portion and thin edges and a locking groove or recess on the under side transversely to the rail and opening at its edges, clamp-bolts with forked inner ends lying wholly above the tie adapted to embrace both a part of the base-plate and the base-flange of the rail, and means for fastening the clamp-bolts to the tie substantially as shown and described. 95 100

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Witnesses:

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