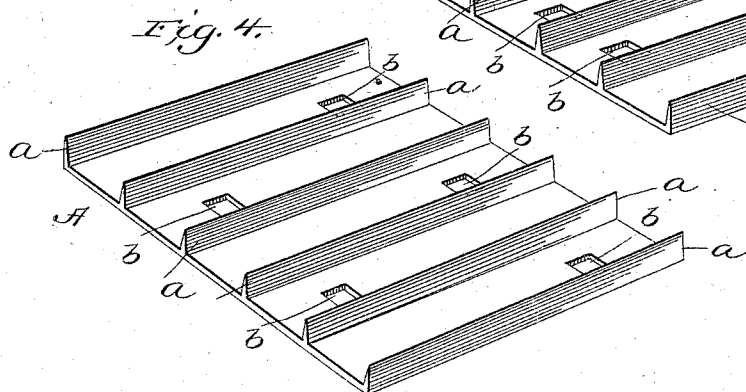
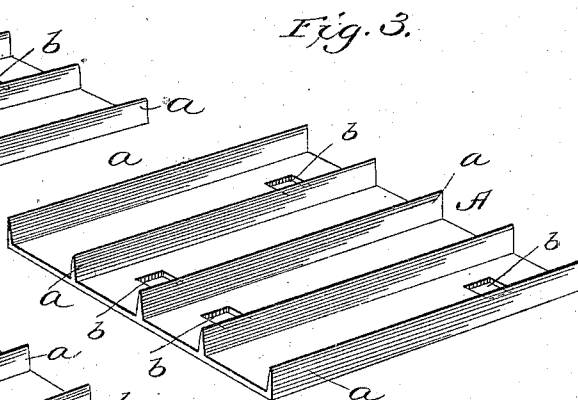
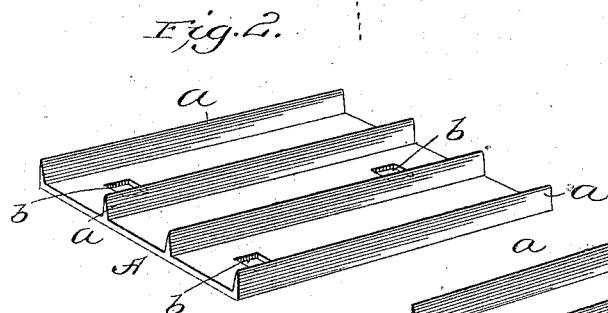
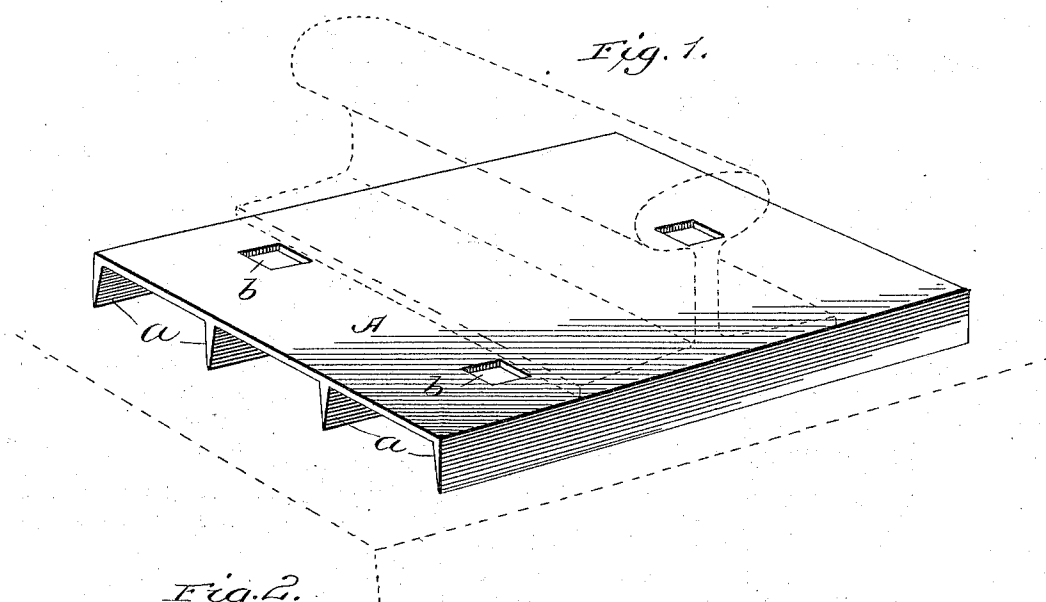


(No Model.)

B. REECE.
RAILROAD TIE PLATE.

No. 541,984.

Patented July 2, 1895.



witnesses:
Henry D. Polver.
Jm O. Wyre.

Inventor:
Benjamin Reece
by J. W. Rutter Jr.
att'y.

UNITED STATES PATENT OFFICE.

BENJAMIN REECE, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE Q AND C COMPANY, OF SAME PLACE.

RAILROAD-TIE PLATE.

SPECIFICATION forming part of Letters Patent No. 541,984, dated July 2, 1895.

Application filed March 23, 1895. Serial No. 542,960. (No model.)

To all whom it may concern:

Be it known that I, BENJAMIN REECE, a citizen of the United States, residing at Chicago, in the county of Cook, State of Illinois, have invented certain new and useful Improvements in Railroad-Tie Plates; and I hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, in which—

Figure 1 is a top perspective view of a tie-plate embodying my invention, the position of the tie and rail indicated in dotted lines. Fig. 2 is a bottom perspective view of the tie-plate shown in Fig. 1 reduced. Figs. 3 and 4 are reduced bottom perspective views of modifications.

My present invention relates to certain improvements in that class of tie-plates wherein the tie-plate is provided on its under surface with a series of longitudinal flanges or ribs which enter the tie parallel with the grain or fiber of the wood to avoid tearing the fiber, which flanges also truss or stiffen the plate transversely of the rail-seat to counteract any tendency of the plate to buckle under the load and tread of the car-wheel.

The object of the present invention is to prevent or obviate the tendency of the tie to check or split when a number of spike-holes are required and used, and also to avoid the weakening of the plate and liability to buckle, incident to increased loss of material, when a plurality of spike-holes are formed on the same side of the rail-seat. In the laying of tracks experience has shown that, owing to the side thrust of the load and the cone of the wheel, the force is exerted in oblique or radial lines, the resultant of which is along a line taken from spike-hole to spike-hole on the outer edge of the foot of the rail, and that while a spike is desirable, if not necessary, on the inner side of the rail the number that secure the outer edge of the rail should be at least two. To so locate spike-holes in trussed tie-plates as at present constructed, two spike-holes, if for opposite sides of the rail must be placed in or substantially in line, which when the spikes are driven in laying the track tends to induce checking or splitting of the tie in the line of the spikes, and the consequent more or less rapid destruction of the tie. If, on the

contrary, the spike-holes are staggered or alternated, it results in bringing two spikes adjacent and within two reinforce or truss ribs, so that not only is the holding power of the spikes diminished, but the loss of material in the tie-plate induces a tendency to buckle at this point. Again, if the truss-ribs or reinforce-flanges are not continuous the tie-plate will give down or buckle in the line of least resistance. In order to overcome these several difficulties and disadvantages, I construct the tie-plate with a plurality of continuous ribs or flanges, not less than four, whereby the spike-holes of the plate may be staggered or alternated, the spike-holes of the same side being separated by ribs and the outer spike-holes bounded by flanges or ribs, and such a construction or its equivalent embodies my present invention.

I will now proceed to describe my invention more fully, so that others skilled in the art to which it appertains may apply the same.

In the drawings, A indicates the tie-plate, the upper or rail surface of which is preferably plain, the plate itself being of light wrought metal, preferably produced by rolling, and of such thickness as will preserve and utilize the resiliency of the tie. Upon the under surface of such plate I produce a series of not less than four (4) longitudinal continuous ribs or flanges *a a a a* at such intervals or such distance apart as will at least permit of the punching or otherwise forming the spike-holes *b b b* along or near to the opposite boundary-lines of the rail-seat in such manner that at least one continuous rib or flange *a* shall intervene or be interposed between each two spike-holes of the same side, and a continuous flange or rib *a* shall also sustain the plate on a line to the outside of the extreme outer spike-holes, so that the series of spike-holes are included between the two outer flanges *a a*, and the intermediate flanges *a a* separate or divide the spike-holes, thus insuring a reinforcing of the plate on the line parallel with the outer edge of the foot-flange of the rail or line of resultant force and obviating any tendency of the plate to buckle from loss of substance.

The number of flanges or truss-ribs may be increased at will, and will be increased pro-

portionately with the number of spikes used in the outer side of the rail, as indicated in Figs. 3 and 4 of the drawings.

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

A railroad tie-plate having a plurality of spike holes on one side of the rail seat, the spike holes on opposite sides of the rail seat
10 staggered or dodged, and on one side of the plate a plurality of continuous flanges or ribs,

not less than four, which ribs or flanges separate the inner spike holes and include the outer spike holes; substantially as and for the purposes specified.

In testimony whereof I affix my signature,
15 in presence of two witnesses, this 22d day of March, 1895.

BENJAMIN REECE.

Witnesses:

H. M. STERLING,
WM. E. DYRE.