

No. 753,307.

PATENTED MAR. 1, 1904.

J. J. PHILLIPS.
RAILROAD TIE AND CHAIR.
APPLICATION FILED AUG. 5, 1903.

NO MODEL.

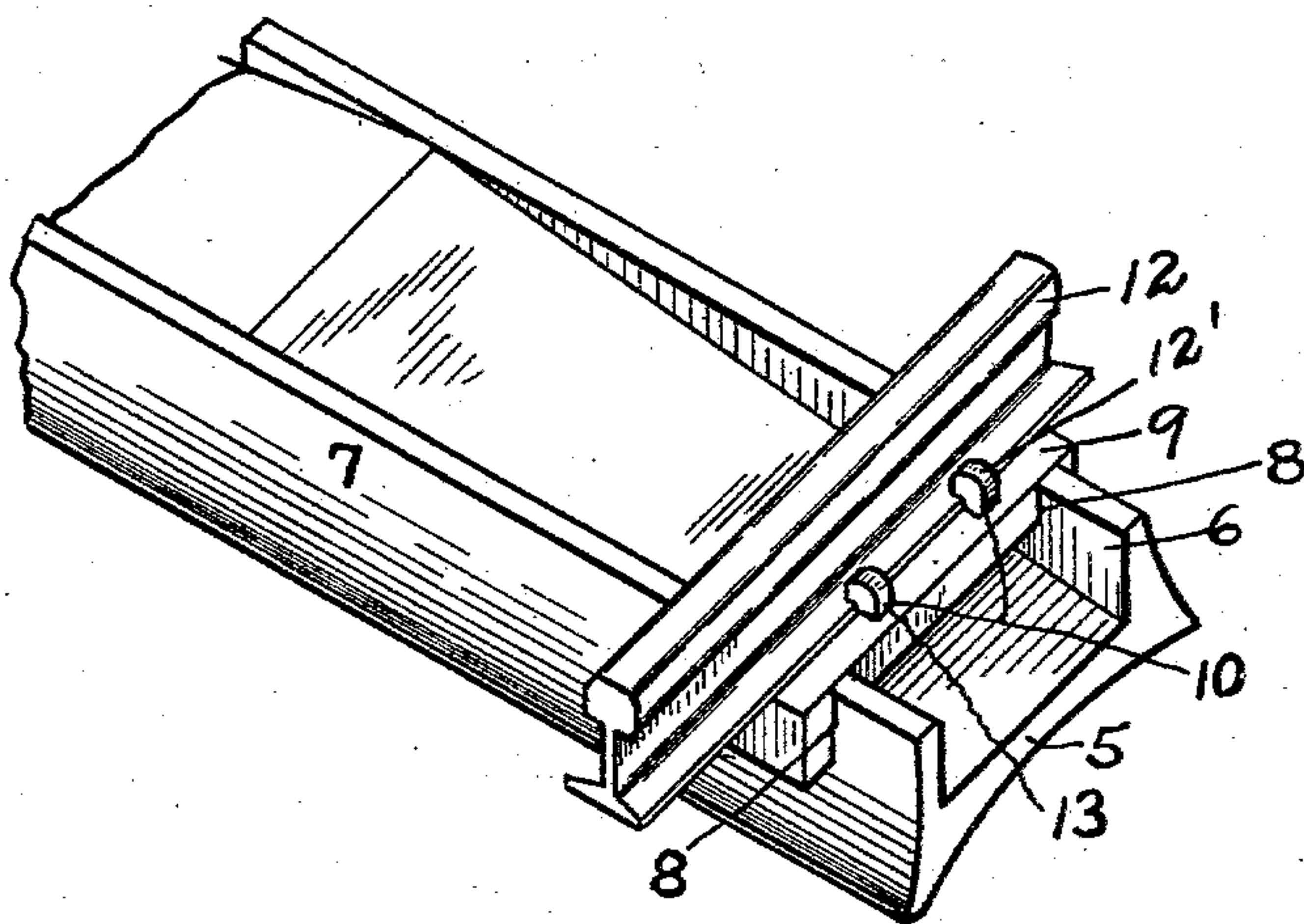


Fig. 1.

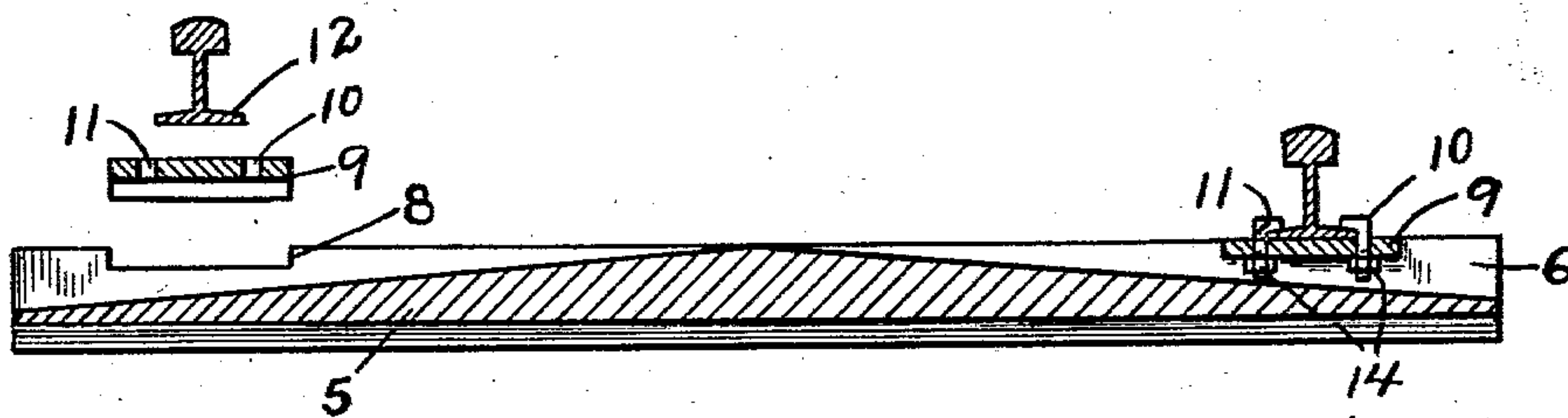


Fig. 2.

Witnesses
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UNITED STATES PATENT OFFICE.

JAMES J. PHILLIPS, OF WOMELSDORF, WEST VIRGINIA, ASSIGNOR
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RAILROAD TIE AND CHAIR.

SPECIFICATION forming part of Letters Patent No. 753,307, dated March 1, 1904.

Application filed August 5, 1903. Serial No. 168,347. (No model.)

To all whom it may concern:

Be it known that I, JAMES J. PHILLIPS, a citizen of the United States, residing at Womelsdorf, in the county of Randolph, State of West Virginia, have invented certain new and useful Improvements in Railroad Ties and Chairs; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to railway ties and chairs; and it has for its object to provide a tie and chair which will cooperate to hold a rail securely in place, which will be simple in construction, cheap of manufacture, easy to apply and remove, and from which rain will readily drain, so that it will have a maximum life.

In the drawings forming a portion of this specification, and in which like numerals of reference indicate similar parts in both views, Figure 1 is a perspective view showing a railway tie and chair embodying the present invention and having portions of rails attached thereto. Fig. 2 is a vertical section taken longitudinally through the tie and including the chair.

Referring now to the drawings, the present tie comprises a longitudinal web portion 5, which is curved transversely or concaved in its under face and from the side edges of which rise the sides 6 and 7, the inner faces of which sides are vertical, while the outer faces of which are concaved, their curvatures of concavity being vertical.

The upper face of the web portion 5 of the tie lies at right angles to the inner faces of the sides, while said upper face slopes longitudinally in both directions from a transverse middle line, the highest portion of the upper face of the web 5 being flush with the upper edges of the sides 6 and 7. The result of this slanting arrangement of the upper face of the web portion of the tie is that rain that falls thereon drains quickly off from the ends of the tie.

In the sides 5 and 6 of the tie and at each

end of the latter are formed transversely-alining recesses or seats 8, and in each pair of transversely-alining seats is disposed a chair 9. Each chair consists of a flat metal plate which is fitted snugly in the corresponding seats and formed vertically, through which plate are two pairs of perforations 10 and 11, spaced apart, so that when the flange of a rail 12 is disposed upon the plate transversely of the tie spikes 12 and 13 may be engaged through the perforations and will fit close to the side edges of the flange of the rail and with their heads overlapping upon the flange. The spikes are in the form of threaded bolts and have nuts 14 engaged with their lower ends and by means of which spikes are drawn down close upon the flanges of the rails. It will be noted that the chair-plates are spaced above the upper face of the web 5 of the tie, so that access to the nuts may be readily had and at the same time the water may readily drain thereunder.

By concaving the lower face of the tie it sets more firmly on the ballast, and the moisture on the under side of the tie will drain therefrom more quickly. By concaving the outer side faces of the tie the ballast fits in the concavity and holds the tie against longitudinal rocking or raising of its ends, it being noted that the upper edges of the outer faces of the tie are spaced apart a lesser distance than the lower edges.

What is claimed is—

1. The combination with a railway-tie comprising a web portion having vertical walls at its side edges, the upper face of the tie between the walls being slanted downwardly in both directions from a middle transverse line and the side walls having seats formed in their upper edges and terminating short of the upper face of the tie between the walls, of chair-plates fitted in the seats and spaced above the upper face of the tie between the side walls, said chair-plates having means for holding rails thereon.

2. The combination with a railway-tie comprising a web portion having vertical walls at its side edges, the upper face of the tie be-

tween the walls being slanted downwardly in both directions from a middle transverse line and the side walls having seats formed in their upper edges and terminating short of the upper face of the tie between the walls, of chair-plates fitted in the seats and spaced above the upper face of the tie between the side walls, said chair-plates having perforations there-through, and clamping-bolts engaged through
10 said perforations and having nuts at their lower ends below the chair-plates in threaded engagement to draw the bolts through the perforations.

3. A metallic railway-tie comprising a cen-

tral longitudinal web portion having its lower face concaved and its upper face slanted downwardly and longitudinally in both directions from a middle transverse line, vertical walls at the side edges of the web portion having their outer faces concaved and the upper edges of the outer faces spaced a lesser distance than their lower edges. 15 20

In testimony whereof I affix my signature in presence of two witnesses.

JAMES J. PHILLIPS.

Witnesses:

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