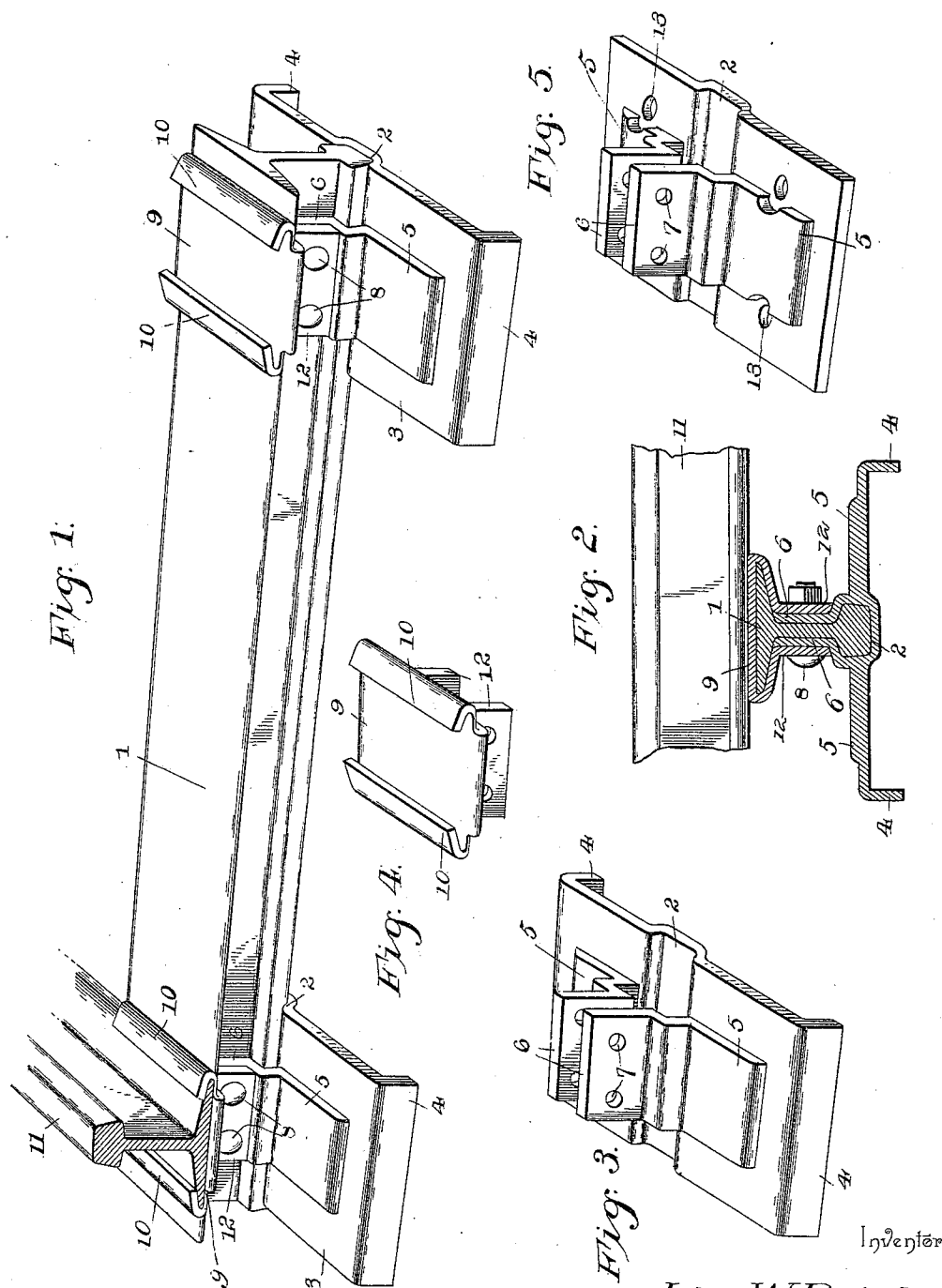


(No Model.)

J. W. PAISLEY.
RAILWAY TIE.

No. 544,192.

Patented Aug. 6, 1895.



Witnesses

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JOHN W. PAISLEY, OF EAST RANDOLPH, NEW YORK.

RAILWAY-TIE.

SPECIFICATION forming part of Letters Patent No. 544,192, dated August 6, 1895.

Application filed November 30, 1894. Serial No. 530,413. (No model.)

To all whom it may concern:

Be it known that I, JOHN W. PAISLEY, a citizen of the United States, residing at East Randolph, in the county of Cattaraugus and State of New York, have invented a new and useful Railway-Tie, of which the following is a specification.

This invention relates to an improvement in that class of railway-ties which are constructed of metal; and it contemplates utilizing worn-out rails to form the tie proper.

The rails are cut in proper lengths and provided at their ends with suitable pillows or bed-pieces, which serve to give the tie solidity in its seat. The tie is also provided with suitable chairs constructed of steel plates bent to comprise downwardly-extending lugs by which they are secured in place and upwardly and inwardly extending flanges which form the chair proper and which are provided to embrace the base-flanges of the rails.

With these broad principles for a basis, the patentable portions of the invention may be said to lie in various features of construction and combination and arrangement of parts, which will appear with the requisite clearness as this specification progresses, and which will be finally embodied in the claims.

In the drawings these features are illustrated, and therein—

Figure 1 represents a perspective view of a railway-tie constructed after the manner of my invention; Fig. 2, a vertical cross-section taken through one of the pillow-blocks or bed-pieces; Fig. 3, a detail perspective of one of said pillow-blocks or bed-pieces; Fig. 4, a detail perspective of one of the chairs; Fig. 5, a detail perspective of a modified form of pillow-block or bed-piece, showing a construction which will permit the application of the same to bridges.

The reference-numeral 1 indicates the tie proper, which is, as before explained, constructed of the usual steam-railway rails, and, preferably, for the sake of economy, of those which have been cast aside or condemned as being unfit for the purpose for which they were originally intended. This tie is arranged with the base-flange upwardly and horizontally and with the tread at the under side and seated within the transverse grooves 2 of the bed-pieces 3. The bed-pieces 3 are two

for each tie and are formed of a plate of steel, rectangular in shape and elongated transversely with the tie proper, the ends of the said bed-pieces being bent downwardly to form the flanges 4, which operate to give the bed-pieces firm seats on the bed of the railway. The grooves 2 are formed midway the lengths of the bed-pieces and by stamping or pressing them into the same.

Welded to the upper sides of the bed-pieces 3, and two for each, are the plates 5. These plates are respectively arranged one on each side of the grooves 2, and have their inner ends bent upwardly to form the parallel lugs 6, which lugs are transversely aligned on each bed-piece, and which lie directly against the web of the tie proper, as may be seen by reference to Fig. 2 of the drawings. These lugs are provided with the perforations 7, which are two for each lug, and through which the bolts 8 pass. The perforations 7 are, of course, aligned with corresponding perforations in the web of the tie 1, it being the province of the lugs 6 and bolts 8 to hold said tie permanently in place on the bed-pieces.

The bolts 8 may be of any number, but it is preferred that there be two bolts for each bed-piece.

The chairs are, of course, two for each tie, and arranged one at each end thereof, they being formed of an integral piece of steel plate shaped to comprise the main portions 9, the sides of which are bent upwardly and thence inwardly and horizontally to form flanges 10, which embrace the edges of the base-flanges of the rails 11, while said base-flanges rest upon the main portions 9 of the respective chairs.

The ends of the main portions 9 are extended to form the lugs 12, which are two for each chair, and which project downwardly and inwardly under the base-flange of the tie proper 1, and thence downwardly, lying snugly against the outer sides of the respective lugs 6. These extensions or lugs 12 have their vertical portions perforated in conformity with the perforations 7 of the lugs 6, and through these perforations in the lugs 12 the bolts 8 pass, as well as through the lugs 6 and the web of the tie proper 1. Thus it will be seen that the tie proper is held on the bed-pieces 3 by two different devices—namely, by

the plates 5, shaped with their lugs 6, and by the chairs having the lugs 12, and all operating with the bolts 8. In addition to this it will be observed that the rails 11 are secured to the ties with the utmost effectiveness and that lateral movement of the rails will be utterly impossible.

Means may be provided for bolting the rails to the chairs, or securing them by other devices, but these are not thought to be necessary, since the joiner of the rails to each other will make longitudinal movement thereof as impossible as lateral movement.

The chairs of my invention are formed of integral pieces of metal, preferably plate-steel, and they may be bent or welded into the proper shape, as convenience in making may require, all of which is irrelevant to the material portions of my invention.

In the use of the invention the bed-pieces 3 are seated upon or buried in the bed of the track, as may be found most advantageous, and the ties proper made to extend transversely across the same, as is usual and as will be readily understood. The rails should now be passed under the flanges 10 of the chairs and upon the main portions 9 thereof, whereby they are securely connected to the ties, as has been explained hereinbefore.

The modification illustrated by Fig. 5 consists merely in dispensing with the flanges 4 and in providing the bed-pieces with the perforations or bolt-holes 13, which are preferably four for each bed-piece and which are provided to permit securing bolts or screws to be passed through the base-pieces and into the timber of the bridge over which the track may pass. The purpose of this modification is, as before explained, to permit the use of my invention on bridges and analogous structures, and it will be obvious that this object is fully attained by the structure illustrated by Fig. 5.

Having described the invention, I claim—

1. A railway tie consisting of a tie proper comprising a horizontal top plate or flange, a web extending vertically from the under side of the same and having a bead or tread at its lower edge, a bed piece at each end of the tie proper and each consisting of a plate having a transverse groove in its upper side in which the bead or tread aforesaid is seated, the bed pieces also having upwardly-projecting lugs respectively lying on each side of the web of the tie proper, and a rail chair for each end of the tie proper and arranged over the respective bed pieces, each chair comprising a main portion having upwardly and inwardly projecting side flanges, and lugs at the ends of the main portions and extending inwardly and thence downwardly under the top portion or flange of the tie proper and on the outer sides of the respective lugs of the bed pieces, the parts being held in place by bolts passing horizontally through the lugs of the bed pieces and of the chair and through the web of the tie proper, substantially as described.

2. A railway tie consisting of a tie proper comprising a horizontal top plate or flange, a downwardly and vertically extending web at the under side thereof, and a bead or tread at the lower edge of the web, a bed piece at each end of the tie proper, each bed piece being provided with upwardly-projecting lugs embracing the web of the tie proper, and a rail chair located over each bed piece and provided with downwardly-extending lugs and embracing the web of the tie proper, and securing bolts passed through the lugs of the bed pieces and chairs and through the web of the tie proper, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

JOHN W. PAISLEY.

Witnesses:

JOHNSON V. GOODWILL,
CLAYTON L. CRAWFORD.