

No. 750,110.

PATENTED JAN. 19, 1904.

J. R. HUBBARD.

RAIL TIE.

APPLICATION FILED AUG. 12, 1903.

NO MODEL.

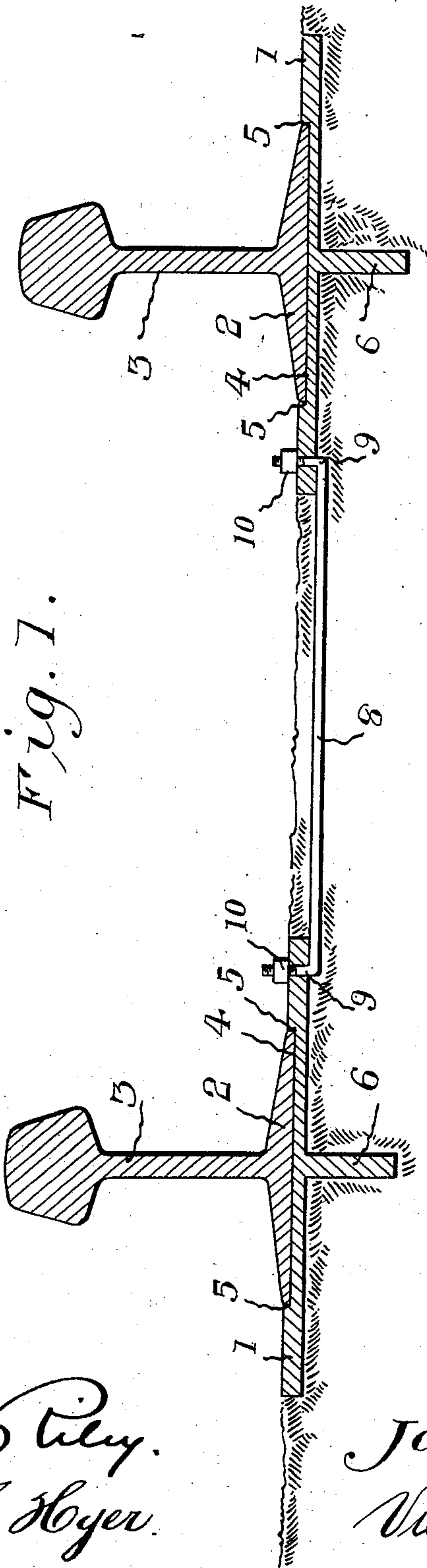


Fig. 1.

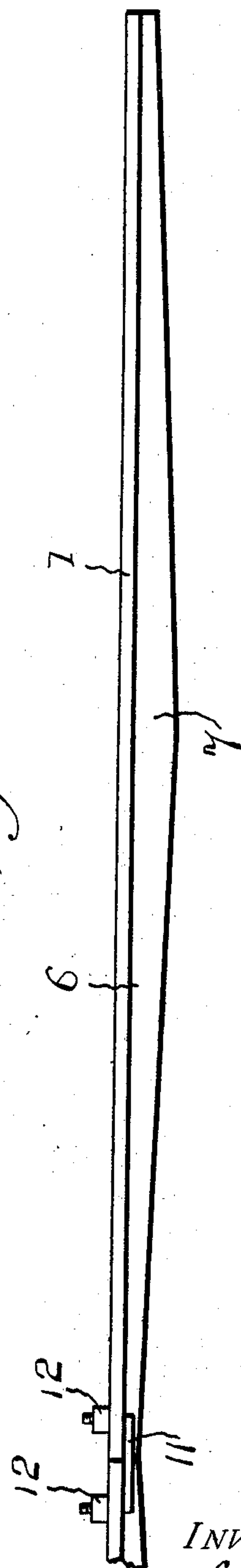


Fig. 2.

WITNESSES:

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JOSEPH R. HUBBARD, OF TRIMBLE, MISSOURI.

RAIL-TIE.

SPECIFICATION forming part of Letters Patent No. 750,110, dated January 19, 1904.

Application filed August 12, 1903. Serial No. 169,289. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH R. HUBBARD, a citizen of the United States, residing at Trimble, in the county of Clinton and State of Missouri, have invented new and useful Improvements in Rail-Ties, of which the following is a specification.

This invention relates to railway construction designed more especially for steam-railways; and it consists, essentially, in longitudinally-disposed metallic ties or stringers provided with upper seats to receive the base-flanges of railway-rails similar to rail-chairs and provided with inner connecting or bonding rods, the ties or stringers being formed with centrally-depending anchor-flanges gradually increasing in width toward their centers.

The invention consists in the details of construction and arrangement of the several parts, which will be more fully hereinafter described and claimed.

The object of the invention is to dispense with the use of wood in railway construction and obviate the necessity of securing track-rails at any other point except at the ends, and thereby facilitate the accurate disposition of rails in forming a track, the gage of the rails depending upon the length of the connecting or bonding rods for the ties or stringers.

In the drawings, Figure 1 is a transverse vertical section showing ties or stringers embodying the features of the invention, with rails thereon and the preferred form of connecting or bonding rods. Fig. 2 is an edge elevation of a tie or stringer connected to a portion of a similar device to illustrate the increase in width of a depending anchor-flange and the mode of rendering the ties or stringers continuous.

Similar numerals of reference are employed to indicate corresponding parts in both views.

The improved tie or stringer has a body 1 of materially greater width than the width of the base-flange 2 of an ordinary railroad-rail 3, and each tie is of practically the same length as the rail and has in the center of the upper portion thereof a longitudinally-extending seat-recess 4, with opposite inwardly-inclined walls 5 of an extent equal to the thickness of the

opposite edges of the said base-flange 2. Depending from the center of the under portion of the body 1 and extending full length thereof is an anchoring-flange 6, which gradually increases in width toward its center, as at 7, the said flange diverging from its central enlargement toward the opposite ends of the tie or stringer. The body 1, with its flange 6, is embedded in the road-bed on which the track is laid, and the flange 6 prevents lateral movement or sidewise displacement of the tie. As a further means of holding the tie or stringer against slipping out of place the inner edges of the opposite ties are attached to each other by connecting or bonding rods 8, arranged at regular intervals and having angular terminals 9 projecting upwardly through openings in the inner edges of the bodies 1 of the oppositely-disposed ties to receive nuts 10, which are caused to bear on the upper surfaces of said bodies. These connecting or bonding rods 8 will be applied at such intervals as may be found necessary and required to overcome displacement in different road-beds.

The rails 3 have their base-flanges 2 moved longitudinally through the seats 4 and are secured solely at the ends by spikes engaging the same and passing into and through the bodies, or by any other preferred means. The ties or stringers have their ends abutting against each other, as shown by Fig. 2, and the conterminous ends are secured by short longitudinally-disposed connecting-links 11, arranged under the outer edges of the bodies 1 and their ends bent at an angle and passed upwardly through the said edges to receive nuts 12. By inwardly inclining the opposite side walls 5 of the seats 4 the flanges 2 of the rails are prevented from having upward movement and will be retained in reliable connection in relation to ties or stringers. It is not absolutely necessary that any fastenings be used for the rails other than the side walls of the seats in the bodies 1; but in some instances it may be found necessary in certain localities and under particular conditions to fasten the rails. The means employed for this purpose will, however, be those known in the art.

It will be seen that the rails laid to form a track on the improved ties or stringers will be maintained in true parallelism, and the operation of track-laying will be greatly expedited.

5 Moreover, the repeated and expensive repair required to maintain track-rails in proper position in relation to each other now necessary in view of the use of wooden ties will be obviated and the road-bed will be more solid,
10 particularly when well ballasted. It will be seen that ballast may be more easily applied to the road-bed by the use of the improved ties or stringers than when ordinary wooden ties are used, and accidents and other annoy-
15 ances arising from loosening of spikes will be prevented.

It is proposed to cast or otherwise construct the improved ties or stringers from metal, and in the event of fracture or injury to any one

of the ties it may be readily removed and re- 20 placed by a substitute.

Having thus fully described the invention, what is claimed as new is—

In railway construction, the combination of ties having bodies with seats extending longi- 25 tudinally through the upper portion thereof and also provided with centrally-depending flanges, the seats having opposite holding-walls, railroad-rails having their base-flanges held in the said seats, connecting-rods engag- 30 ing the inner opposing edges of the ties, and links for connecting the terminals of the ties.

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

JOSEPH R. HUBBARD.

Witnesses:

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JAMES HENDERSON.