

G. S. THOMPSON.
RAILROAD TIE.
APPLICATION FILED APR. 13, 1909.

933,862.

Patented Sept. 14, 1909.

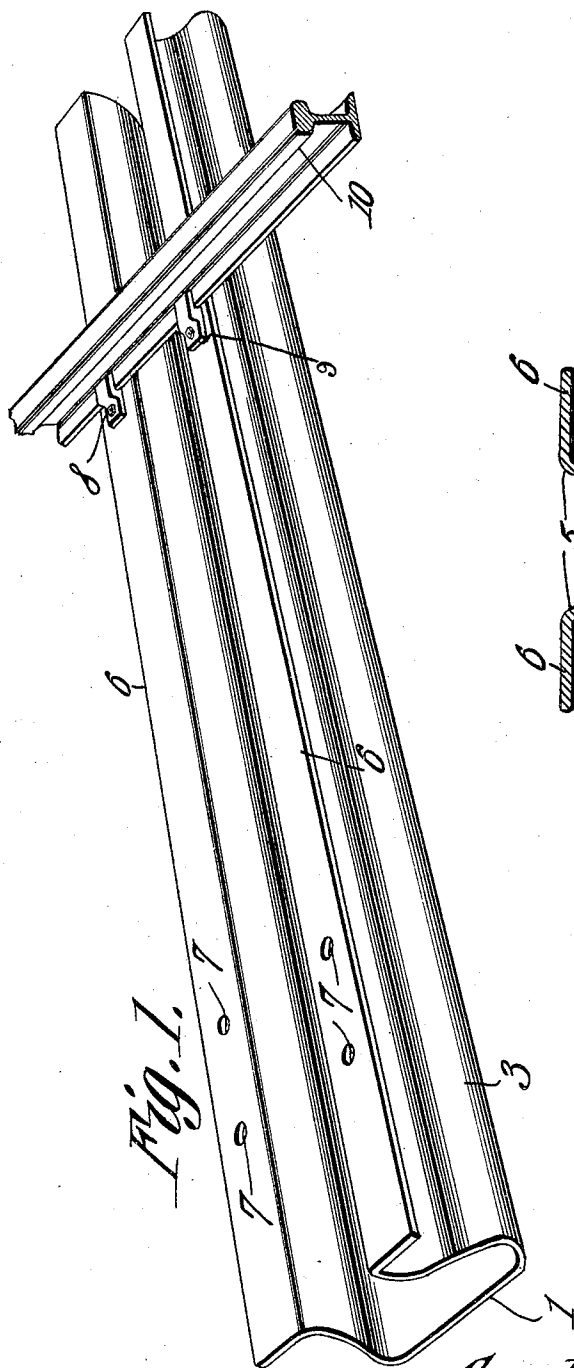


Fig. 1.

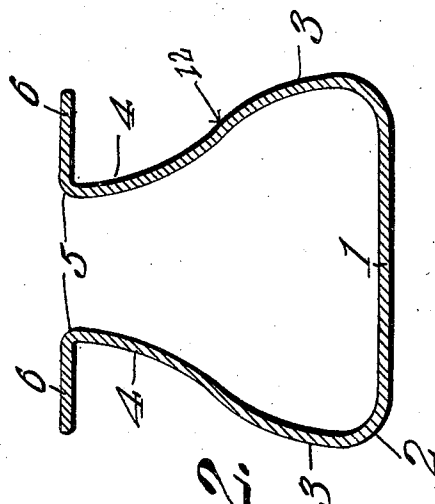


Fig. 2.

Witnesses

E. H. Clement
Nelson B. Lawton

Inventor
Gordon S. Thompson.

By *C. A. Snow & Co.*
Attorneys

UNITED STATES PATENT OFFICE.

GORDON S. THOMPSON, OF AVON BY THE SEA, NEW JERSEY.

RAILROAD-TIE.

933,862.

Specification of Letters Patent. Patented Sept. 14, 1909.

Application filed April 13, 1909. Serial No. 489,564.

To all whom it may concern:

Be it known that I, GORDON S. THOMPSON, a citizen of the United States, residing at Avon by the Sea, in the county of Monmouth and State of New Jersey, have invented a new and useful Railroad-Tie, of which the following is a specification.

It is the object of this invention to provide a metal railroad tie of such a shape as to yield slightly under the weight of a passing train, the tie, by its peculiar construction, being adapted to be held securely by the ballast and to rest firmly therein.

Other objects will be made manifest hereinafter as the description of the invention progresses, and it is to be understood, that, since the drawing illustrates but one embodiment of the invention, changes, properly falling within the scope of what hereinafter is claimed, may be made without departing from the spirit of the invention.

Similar numerals of reference are employed to denote corresponding parts throughout the several figures of the drawings, in which:—

Figure 1 shows my invention in perspective; Fig. 2 being a vertical transverse section.

In carrying out my invention, I cause a piece of metal to assume, by rolling, casting, or other manipulation, a trough shape. The bottom of the tie is flat, as denoted by the numeral 1, that the device may rest squarely upon the ballast. The edges of the bottom are upbent in a somewhat abrupt curve, as denoted by the numeral 2, and, continuing upward, bulge, in an outward curve, as denoted by the numeral 3. Above the curved portion 3, the curvature of the sides of the tie is reversed, to bring the sides into relatively close relation as denoted by the numeral 4. The sides are then bent outwardly in opposite directions, somewhat sharply, as denoted by the numeral 5, to form flanges 6. As clearly shown in Fig. 1, these flanges are provided with apertures 7, designed to receive bolts 8, carrying clips 9, adapted to engage the flange of a rail 10. Any other suitable means for assembling the rail with the tie may be employed, the bolts 8 and the

clips 9 furnishing merely one means to the end sought.

Since the portions 4 and 3 of the sides of the tie are not disposed normal to the plane of the bottom 1, and owing to the fact that the sides of the tie are inclined toward each other at their upper edges, the tie will have some resiliency which will allow it to give to a slight degree under the weight of a passing train, the said tie readily assuming its normal position after the train has passed. When a railroad is equipped with ties constructed in accordance with my invention, the said ties will not be pushed downward into the ballast under the weight of a passing train, and the alinement and grade of the track will require but infrequent attention. The ballast, being included between the flanges 6 and the bulging portion 3 of the tie, will serve to retain the tie in its place, the flanges 6 tending to prevent the tie from working downward in the ballast.

The peculiar reversed curvature given to the sides of the tie results in the formation, adjacent the bottom of the tie, of a ballast-receiving shoulder 12. The ballast will tend to settle toward the bottom of the tie, but, owing to the reversed curvature, whereby the shoulder 12 is formed, the ballast, although tending to settle about the tie, will be retained upon the sides of the same, by the shoulder 12.

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

A railroad tie fashioned from a single piece of metal bent to form a trough having its upper edges oppositely extended to form horizontally disposed flanges, the bottom of the tie being flat, the bottom and the sides of the tie being smooth throughout their entire extent, the sides of the tie being reversely curved, to cause the tie to bulge adjacent its bottom, the bulged portions outstanding beyond the flanges, the reversed curvature of the sides of the tie causing the said sides to approach each other most closely adjacent the flanges, the reversed curvature of the sides of the tie causing the upper portions of the sides to lie within a straight line

drawn from the points of union between the
flanges of the tie and the sides, tangent to
the bulged portions thereof, whereby to
form, at the points of union between the up-
5 per portions of the sides of the tie and the
bulged portions thereof, ballast-receiving
shoulders extending unbroken the entire
length of the sides of the tie.

In testimony that I claim the foregoing
as my own, I have hereto affixed my signa- 10
ture in the presence of two witnesses.

GORDON S. THOMPSON.

Witnesses:

JOHNS HARTZ,
F. R. CASNER.