No. 871,695. PATENTED NOV. 19, 1907.

E. HENRY.

RAILWAY TIE.

APPLICATION FILED DEC. 5, 1906.

Fig. 1.

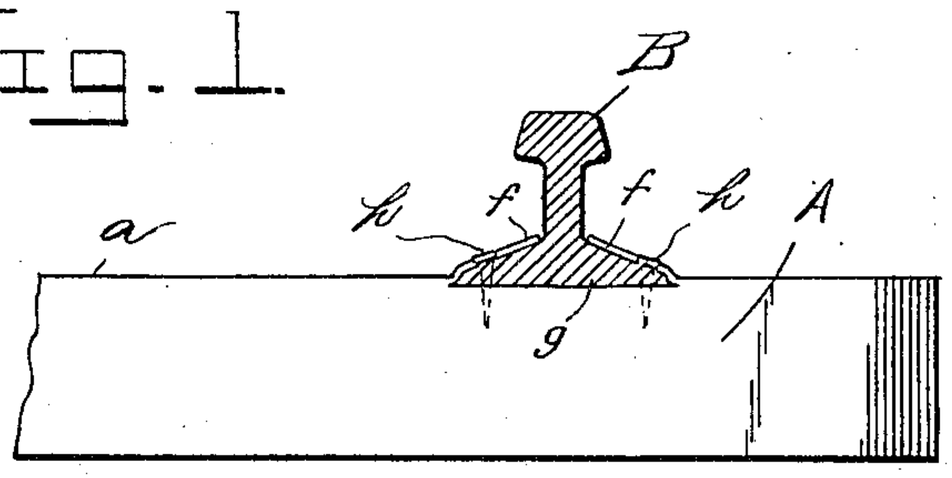

Fig. 2.

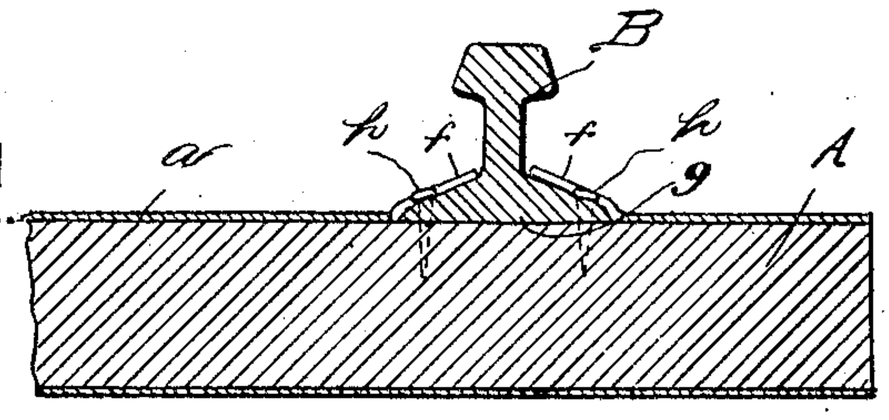

Fig. 4.

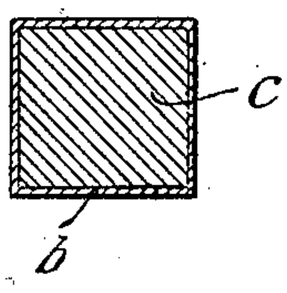

Fig. 3.

Fig. 5.

Witnesses
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RAILWAY-TIE.

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To all whom it may concern:

Be it known that I, EDWARD HENRY, a citizen of the United States, residing at Belcherville, in the county of Montague, State of Texas, have invented certain new and useful Improvements in Railway-Ties; 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 has relation to railway ties, made partially of wood and partially of metal, the wood forming the body of the tie, and, as it were, a core to the metallic portion, which is formed as an inclosing shell to the core.

It is proposed to make a cut transversely and in the top of the shell, centrally longitudinally in the plane of the rail supported by the tie, and to make slits in or cut away slight parts longitudinally of the shell at its upper side edges, equidistant in length from the transverse slit, forming tongues which may be turned up and clamped down on the upper sides of the sloping flanges of the rail thus constituting rail-braces, and spiked to the latter by spikes driven into the wood at any of several points where notches are made in the sides of the rail-braces.

The nature of the invention is ascertainable from the annexed drawings, forming a part of this specification, in view of which the improvements will first be described with respect to their construction and manner of use, and then be pointed out in the subjoined claims.

Of the said drawings—Figure 1 is a side elevation of one end of my improved tie, showing a cross section of a rail in place thereon. Fig. 2 is a longitudinal section of what is represented in Fig. 1. Fig. 3 is a plan of what is represented in Fig. 1. Fig. 4 is a cross section of the tie taken between the rails. Fig. 5 is a perspective view.

Similar numerals of reference designate similar parts or features, as the case may be, wherever they occur.

In the drawings A designates the tie and B the rails of the track supported on and secured to the tie.

The tie is composed of an outer shell *a* that is substantially rectangular in cross section, which shell is composed of steel or other suitable metal bent to proper form, its longitudinal edges *b* meeting beneath the bottom of the core or tie proper *c* composed of wood fitting the interior of the shell *a*.

At points where the rails cross the tie, a transverse slit *d* is cut across the top of the shell from edge to edge. I then cut out a narrow strip from the margin of the top, as at *e*, equidistant longitudinally of the tie from the slit *d* thus forming two tongues *f*.

The cut-away strips at the sides of the tongues *f* are of a length corresponding to the breadth of the base *g* of the rail, so that when the tongues *f* are turned back the rail may rest on the upper surface of the wood or core of the tie. After the rail is put in place the tongues *f* are turned back on the upper sloping sides of the rail-base and spiked down by spikes *h* driven into the wood from the cut-away space *e*, the laterally projecting head of the spike overlapping the tongue as shown. In this way a substantial and durable tie is produced, at low cost in which the rails are securely held against spreading.

It is to be noted that the tongues or rail braces *f* are not only left intact on the line of their connection with the shell *a* at their base, so that they may be kept down on the upper faces of the flange of the rail with their inner edges bearing against the web to brace it in position, but the said flanges are aided in the performance of the said functions by the spikes *h* which are driven into the tie at the edges of the brace, the head of the spike overlapping the brace or tongue and holding it down in effective position.

Instead of cutting away a small portion of the shell at the sides of the tongue, I may simply cut slits *i* therein and form notches *j* in the sides of the tongues, through which the spikes may be driven. Moreover the outer shell may not extend the full length of the tie but only on the ends thereof as shown in Fig. 5.

What is claimed is—

A railway-tie comprising an outer metallic shell, substantially rectangular in cross section, and a body or core of wood, the shell having integral tongues at its opposite ends cut out of the shell on the lines where the rails cross the ties, permitting the flanged base of the rails to rest on the wood or core, the said tongues with their inner edges against the web of the rail being turned back

on the upper sides of said rail flanges and spikes driven into the wood at the outer edges of the tongues, with the heads of the spikes over-lapping the same and securing the tongues on the flanges of the rails to keep the latter down in place and the two rails from spreading.

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

EDWARD HENRY.

Witnesses:
N. S. SMITH,
S. Y. DILLON.