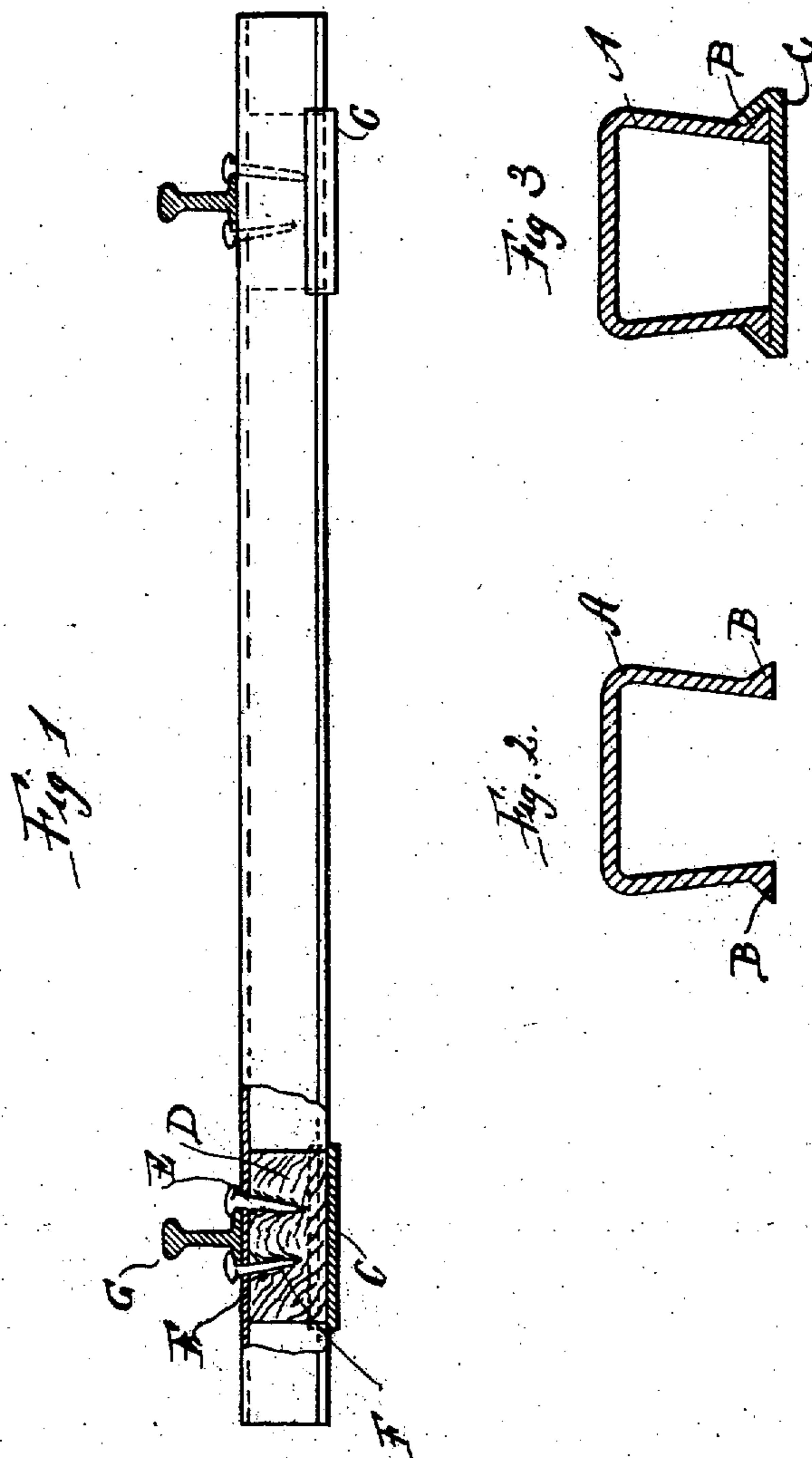


No. 850,087.

PATENTED APR. 9, 1907.

W. H. GRIFFITHS.
COMPOSITE RAILWAY TIE.
APPLICATION FILED OCT. 6, 1906.



WITNESSES:

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WILLIAM H. GRIFFITHS, OF CHESTER, PENNSYLVANIA.

COMPOSITE RAILWAY-TIE.

No. 850,087.

Specification of Letters Patent.

Patented April 9, 1907.

Application filed October 5, 1906. Serial No. 337,532.

To all whom it may concern:

Be it known that I, WILLIAM H. GRIFFITHS, a citizen of the United States, residing at Chester, county of Delaware, and State of Pennsylvania, have invented a certain new and useful Improvement in Composite Railway-Ties, of which the following is a specification.

My invention relates to a new and useful improvement in composite railway-ties, and has for its object to provide an exceedingly simple and effective device of this description the body of which is made of channeled metal having blocks of wood or other suitable material fitted in the ends thereof beneath that portion upon which the rails are to rest, said blocks being capable of receiving the spikes for holding the rails in place.

With these ends in view this invention consists in certain details of construction and combination of elements hereinafter set forth and then specifically designated by the claims.

In order that those skilled in the art to which this invention appertains may understand how to make and use the same, I will describe its construction in detail, referring by letter to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a side view of a tie made in accordance with my improvement, one end being broken away to more clearly show the spike-block therein; Fig. 2, an enlarged section of the tie before the spike-blocks or clamp-plates are applied thereto; Fig. 3, a similar view showing one of the spike-blocks and clamp-plates in place.

In carrying out my invention as here embodied, A represents the metal portion of the tie, which is rolled into approximately U shape from iron or steel, the side walls thereof being set inward, so as to make the lower portion of the channel narrower than the upper portion, as clearly shown in Figs. 2 and 3.

B are flanges formed upon the bottom edges of the side walls of the tie and extend the full length thereof, and these flanges I prefer to form on a bevel or at such an angle as to readily receive the intumed flanges of the clamp-plates C, which latter are adapted to be forced over these flanges lengthwise of the tie.

In practice the spike-blocks D are driven in each end of the tie, and the clamp-plates

are then forced onto the flanges, thus clamping the spike-plates in place and preventing the tie from spreading.

After the tie is rolled the holes E are punched therein at the proper points for receiving the spikes F to hold the rails G in place, as will be readily understood.

While I have found that wood is an exceedingly good material for the spike-blocks, I have also found that a certain composition of cement will serve the purpose equally as well and will last much longer when embedded in the road-bed, as it will not be affected by moisture and changes of temperature.

Among the advantages of my improved tie is its lightness, due to the fact that it is hollow, which also reduces the cost thereof, and by the use of the spike-blocks the same effect and result is had as though the entire tie were made of wood.

A certain amount of cushion action is given to the tie by reason of the side walls thereof being set inward, since when the pressure of a train is brought to bear upon the tie the side walls on account of their angles will have a tendency to spring. Another decided advantage of my improvement is that the tie being hollow when it is set in the road-bed and the material tamped around it the earth and stone will be forced up into the interior thereof, thus giving it a firm grip upon the road-bed and prevent it from becoming displaced, and the spike-blocks will also act as buffers to prevent the tie from slipping sidewise, and this is especially advantageous on curves.

Having thus fully described my invention, what I claim as new and useful is—

1. As a new article of manufacture, a railway-tie consisting of a U-shaped channel-iron having the side walls thereof set inward, beveled flanges formed upon the outer edges of the side walls, spike-blocks fitted within the ends of the tie and clamp-plates engaging said flanges.

2. In combination, a railway-tie formed of a single piece of channel metal, the side walls of which are set inward, said side walls having beveled flanges formed thereon, spike-blocks located within the ends of the tie and clamp-plates engaging said flanges whereby the side walls are prevented from spreading and the spike-blocks held in place, as specified.

3. A composite railway-tie consisting of a hollow channel-iron having holes therein for the passage of the spikes, the side walls of said channel-iron being set inward, beveled
5 flanges formed upon the lower edges of said side walls, spike-blocks fitted in the ends of the channel-iron and two clamp-plates adapted to engage said flanges to hold the spike-blocks in place and prevent the side walls

of the channel-iron from spreading, as specified.

In testimony whereof I have hereunto affixed my signature in the presence of two subscribing witnesses.

WILLIAM H. GRIFFITHS.

Witnesses:

NELLIE M. FINEGAN,
S. M. GALLAGHER.