No. 683,160. Patented Sept. 24, 1901.

B. F. WHITE.

RAILROAD TIE.

(Application filed July 12, 1901.)

(No Model.)

Fig. 1.

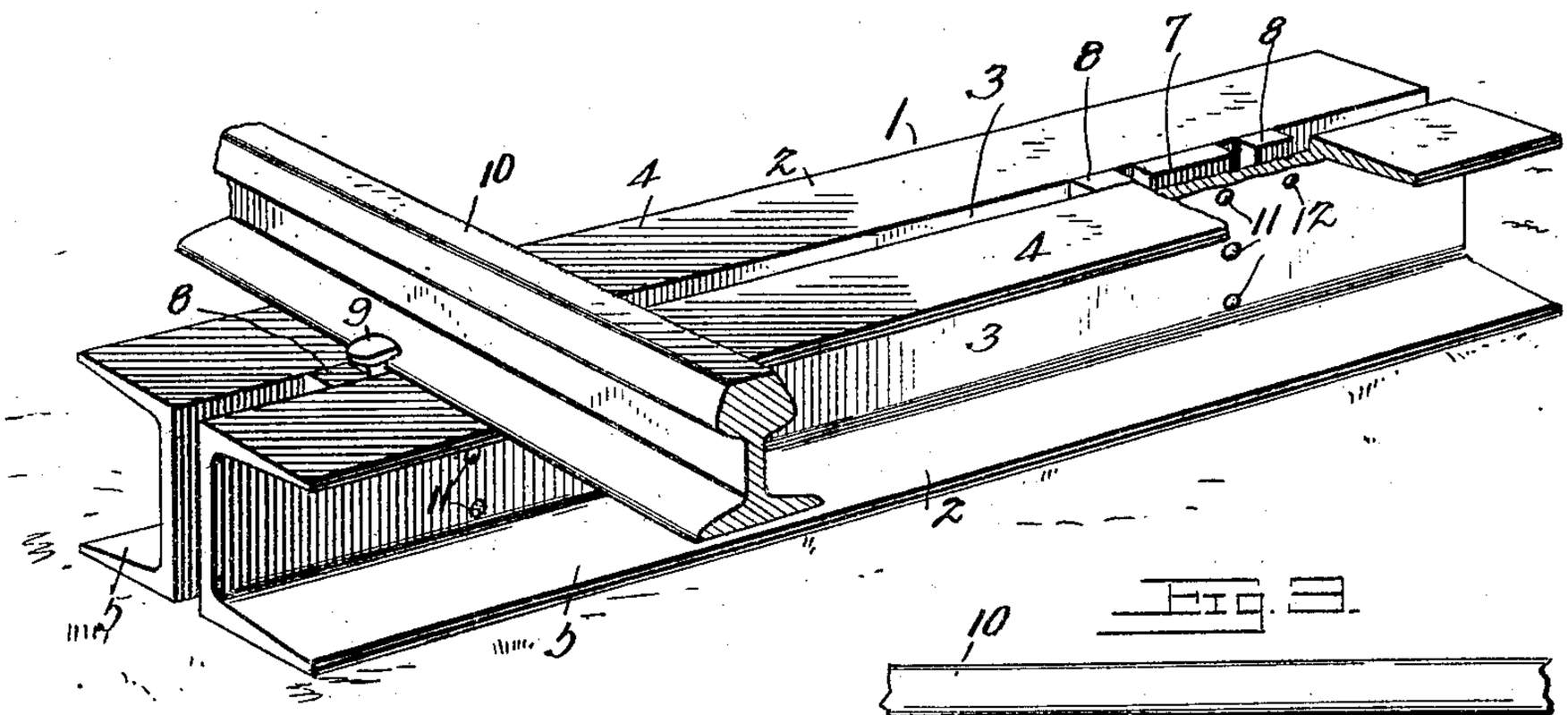


Fig. 2.

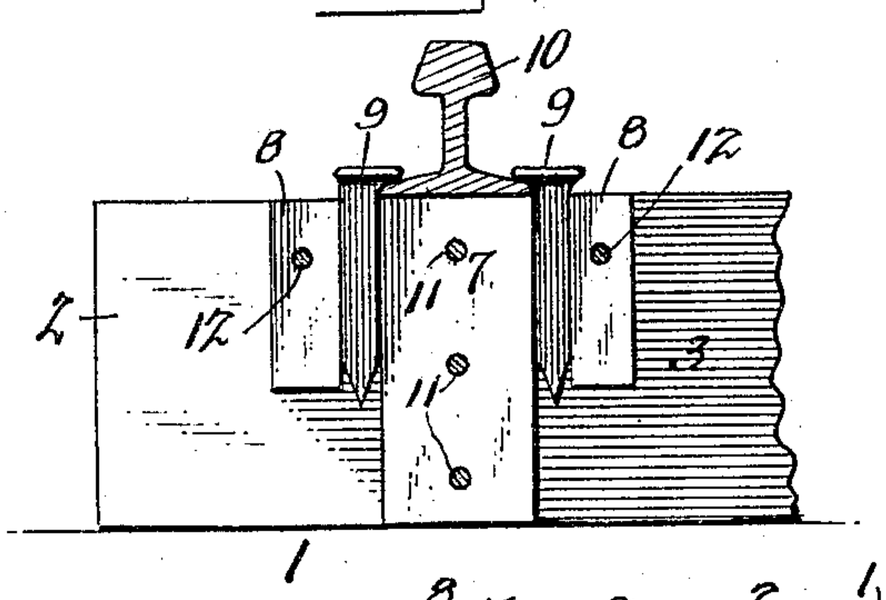


Fig. 3.

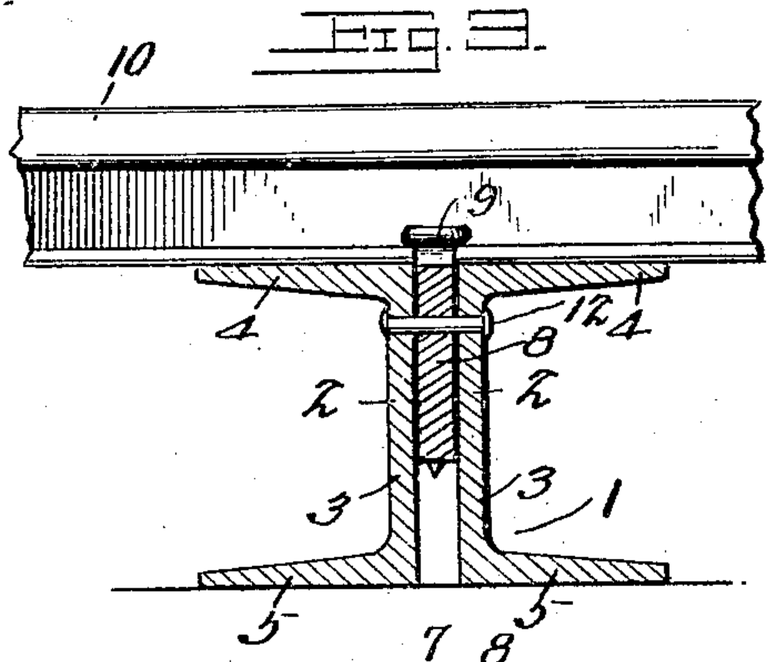
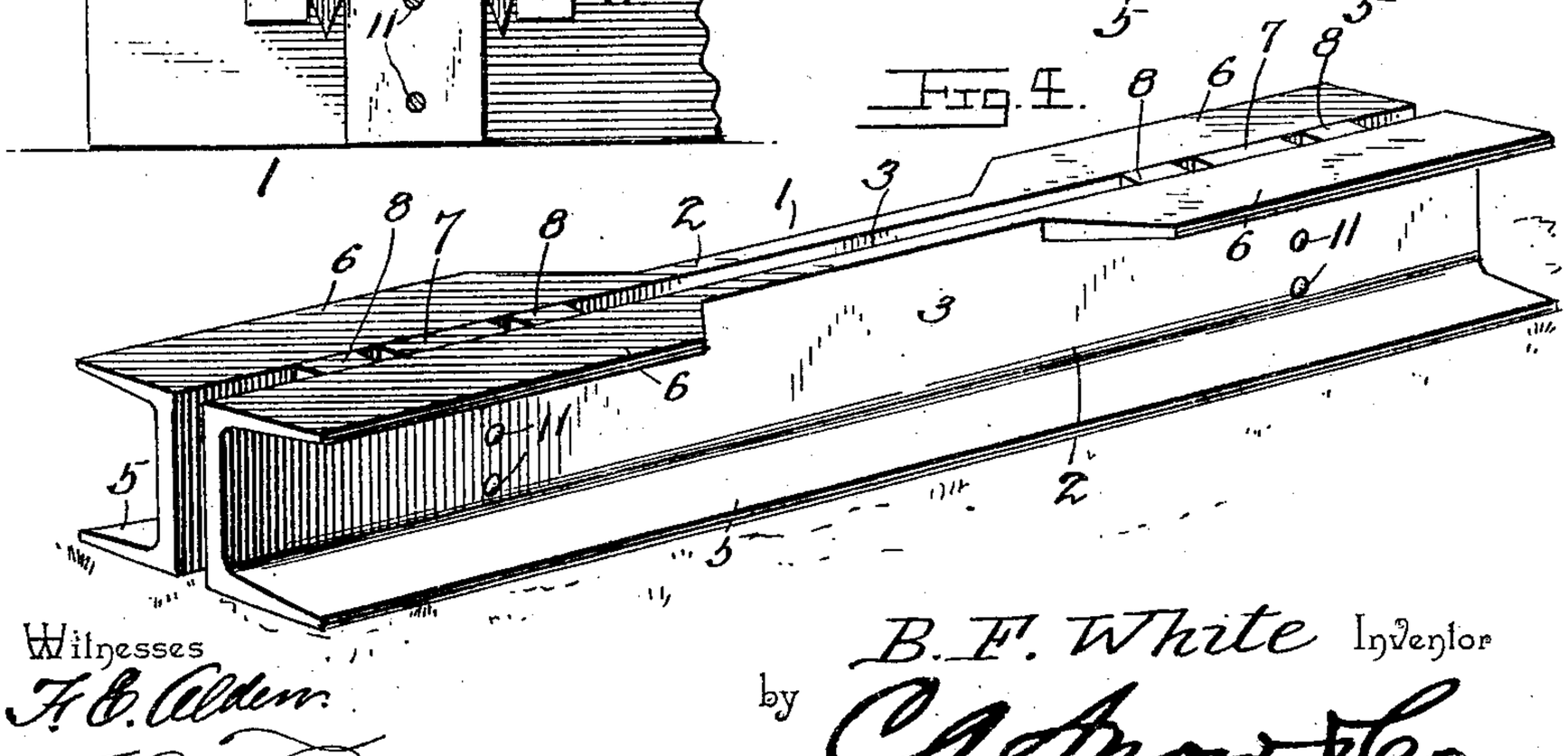


Fig. 4.



Witnesses
F. B. Allen.
T. J. Riley

B. F. White Inventor
by Cushman & Co
Attorneys

UNITED STATES PATENT OFFICE.

BENJAMIN F. WHITE, OF LEBANON, PENNSYLVANIA, ASSIGNOR OF ONE-HALF TO HORACE L. PRITZ, OF MANHEIM, PENNSYLVANIA.

RAILROAD-TIE.

SPECIFICATION forming part of Letters Patent No. 683,160, dated September 24, 1901.

Application filed July 12, 1901. Serial No. 68,106. (No model.)

To all whom it may concern:

Be it known that I, BENJAMIN F. WHITE, a citizen of the United States, residing at Lebanon, in the county of Lebanon and State of Pennsylvania, have invented a new and useful Railroad-Tie, of which the following is a specification.

The invention relates to improvements in railroad-ties.

The object of the present invention is to improve the construction of railroad cross-ties and to provide a simple and comparatively inexpensive one which will possess great strength and durability and which will afford the necessary elasticity and enable the rails to be securely spiked to them.

A further object of the invention is to provide a metallic cross-tie which will be practically indestructible and which will possess all of the advantages of an ordinary wooden cross-tie, so as to take the place of the same.

The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

In the drawings, Figure 1 is a perspective view of a cross-tie constructed in accordance with this invention. Fig. 2 is a longitudinal sectional view of one end of the cross-tie. Fig. 3 is a transverse sectional view of the cross-tie. Fig. 4 is a perspective view illustrating a slight modification of the cross-tie.

Like numerals of reference designate corresponding parts in all the figures of the drawings.

1 designates a cross-tie composed of two channel-iron sections 2, spaced apart and connected together by the means hereinafter described. These channel-iron sections, which may be varied in form, are composed of vertical webs 3 and upper and lower horizontal flanges 4 and 5, and the upper flanges may be continuous, as illustrated in Fig. 1, or sections 5, having end flanges 6 at their tops, may be provided, as illustrated in Fig. 4 of the accompanying drawings. The form of the sections may be changed and the size and weight may be varied to adapt the cross-tie to the character of road to which it is to be applied. The sections are spaced apart at each end by a rigid vertical block 7 and a pair of pivoted clamping-blocks 8, located at opposite sides of the rigid vertical block and adapted to engage spikes 9, whereby the latter are prevented from becoming loose and are securely held in engagement with a rail 10. The rigid vertical block, which is located directly beneath the rail 10 and which extends entirely across the same, has its upper end arranged flush with the upper faces of the sections of the cross-tie, and it is provided with a vertical series of perforations which register with corresponding perforations of the webs of the sections and which receive rivets 11 or other suitable fastening devices. The clamping-blocks which engage the outer edges of the spikes are perforated for the reception of rivets 12, which form pivots for the said blocks and which are located above the centers of the same. The side edges of the central stationary block 7 are vertical, and the clamping-blocks are provided with straight inner engaging edges and in practice will be spaced from the stationary block a distance slightly less than the thickness of the spikes, whereby when the spikes are driven into the spaces between the blocks the lower longer arms of the pivoted clamping-blocks will be forced away from the stationary blocks slightly and the upper shorter arms of the clamping-blocks will be caused to clamp and firmly hold the spikes, whereby the latter are prevented from becoming loose. By this construction the rails are securely fastened to the cross-tie. When sufficient force is applied to the spikes, the latter may be readily withdrawn to permit the rails to be removed.

It will be seen that the cross-tie is strong and durable, that it is practically indestructible, and that it possesses the necessary elasticity and all of the advantages of a wooden cross-tie; also it will be clear that the clamping devices space the sections apart and are capable of firmly gripping a spike and of securely holding the same in engagement with a rail.

What I claim is—

1. A cross-tie comprising the sections, and the spike-engaging devices interposed be-

tween and spacing the sections, substantially as described.

2. A cross-tie provided with a stationary block, and having a clamping-block pivotally mounted on it and spaced from the stationary block to receive a spike and arranged to clamp the same, substantially as described.

3. A cross-tie comprising the sections spaced apart, the stationary block arranged between and rigidly secured to the sections, and the clamping-blocks pivotally mounted between the sections and spaced from the stationary block, substantially as described.

4. A cross-tie comprising the sections spaced apart, and blocks interposed between the sections and spaced apart to receive a spike and arranged to clamp the same, substantially as described.

5. A cross-tie comprising the sections spaced apart, the stationary block rigidly secured between the sections, and the clamping-block located between the sections and spaced from the stationary block, and pivoted above its center, substantially as and for the purpose described.

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

BENJAMIN F. WHITE.

Witnesses:

M. H. WELTMER,

C. U. BOGER.