

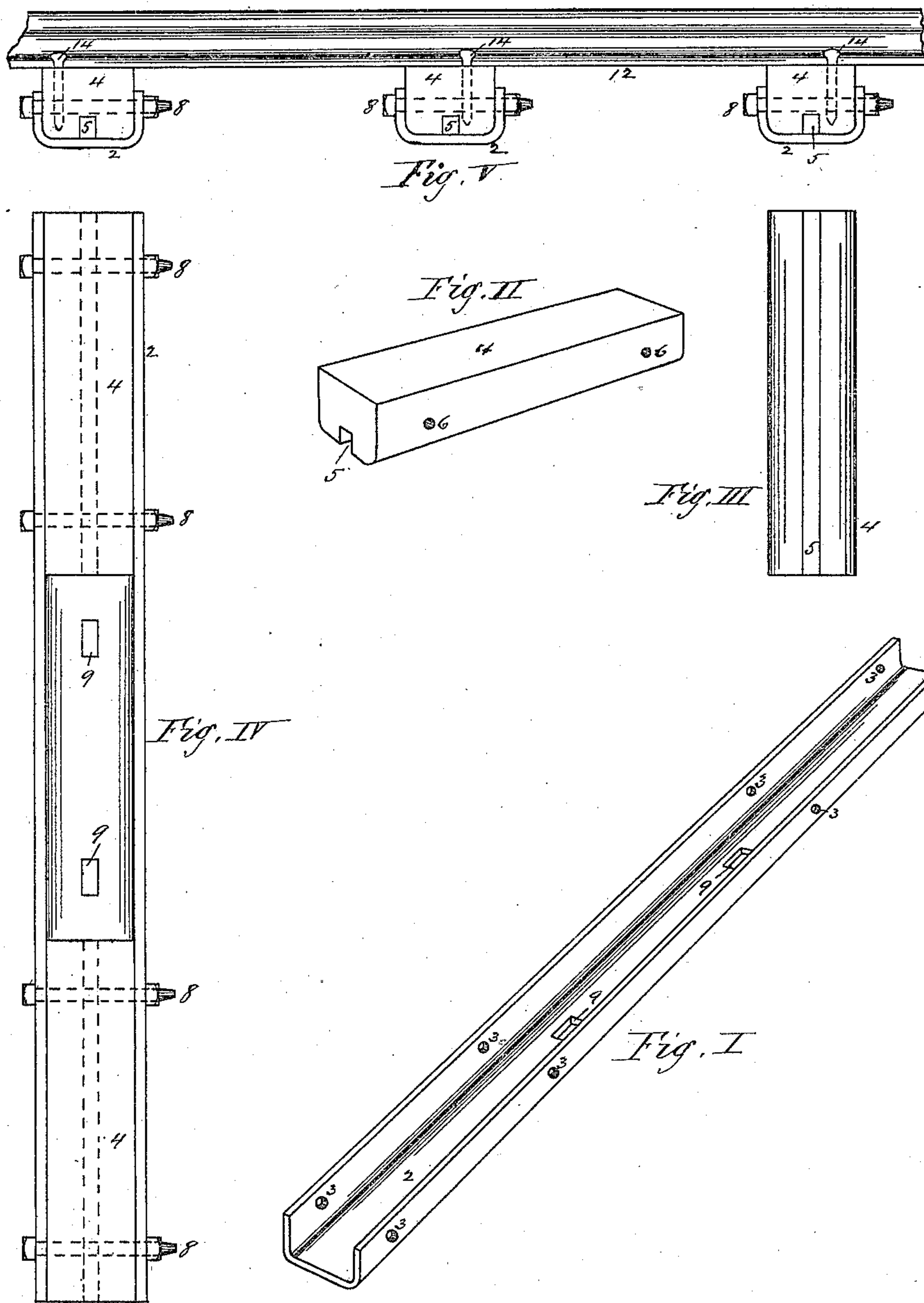
(No Model.)

J. H. WILLIAMS.

RAILWAY TIE.

No. 309,428.

Patented Dec. 16, 1884.



Witnesses. Geo. S. Tiffany.
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UNITED STATES PATENT OFFICE.

JOHN H. WILLIAMS, OF BOSTON, MASSACHUSETTS.

RAILWAY-TIE.

SPECIFICATION forming part of Letters Patent No. 309,428, dated December 16, 1884.

Application filed October 27, 1883. (No model.)

To all whom it may concern:

Be it known that I, JOHN H. WILLIAMS, of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and useful Improvement in Railroad-Ties, of which

The object of my invention is to provide a durable and cheap tie upon which to lay and secure the track-rails of a railway; and I accomplish this by the mechanism substantially as hereinafter described, and illustrated in the accompanying drawings, in which—

Figure I is a perspective view of the tie-iron or metal portion of the tie. Fig. II is a perspective view of one of the wood blocks which are fitted and secured one in each end portion of the tie-iron or trough. Fig. III is a plan view of the lower side of the wood block. Fig. IV is a plan view of the tie, showing the wood blocks secured in the tie-iron or trough; and Fig. V is an end view of two of the ties laid as in the manner of laying and securing the ties on a road-bed, and showing the track-rail as laid upon the wood blocks.

In the drawings, 2 represents the metal portion of the tie, which, for convenience of description, I denominate the "tie-iron," and which may be made of suitable boiler-iron or other iron of proper thickness to insure the requisite strength, and rolled or bent into the form of a trough, having any desired number of holes, as 9, in the bottom to permit the water to flow out, and whose vertical sides are perforated, as at 3, to receive the bolts 8. A wood block, 4, is fitted into each end portion of the tie-iron 2, the upper surface of each block being a sufficient distance above the upper edges of the tie-iron—say one or two inches—to keep the rail always above said upper edges of the iron. I make a groove, 5, extending longitudinally in the bottom of the wood block, so that the water which might collect in the iron beneath the block may flow out freely, and these blocks 4, being placed one in each end portion of the iron, are firmly secured by the bolts 8, inserted through holes in the block, and also through the holes 3 in the iron. These tie-irons, which may be formed in the proper shape by rolling, or in any other convenient manner, are laid in the road-bed of a railway much as the ordinary wooden ties

are now placed in position, (the wood blocks 4 being secured therein either before or after the irons 2 are placed in position,) and with the upper surfaces of the blocks above the upper edges of the iron, as shown clearly in Fig. V, and the ordinary track-rails, 12, are then laid upon the wood blocks and secured in position by the common spikes, 14, driven by the sides of each rail into the wood blocks, as shown in Fig. V. If desired, these tie-irons 2 may be treated with or have a coating of asphaltum, or have any other desired substance applied thereto to prevent rust, and when laid will last a long time, and a supply of wood blocks may be kept on hand, so that as fast as any become unfit for further use by reason of wear or decay those may be easily and quickly removed by drawing the spikes, removing the bolts 8, and inserting a new block in place of each one removed and replacing the bolts, and all without in the least disturbing the tie-iron 2.

The difficulty of obtaining the large wooden ties with which to make the ordinary and necessary repairs upon railways is becoming more and more serious from year to year, and my invention removes in great part this difficulty, because it only becomes necessary to use for each tie a comparatively small piece of wood beneath and for a short distance each side of each rail, and of sufficient size to support the rail and to receive the spikes; and it is believed that the wood blocks 4 will last much longer than the ordinary wooden ties, as they are protected from the destructive action of the dampness of the earth by the bottom and two vertical sides of the iron, the latter feature also giving a great degree of strength to the tie when complete.

It is obvious a single block running the length of the channel-iron may be substituted for the two.

I am aware that a railway-tie composed of a channel-iron and a block or blocks of wood secured therein is not new, broadly, such having been patented before, and therefore I desire to have it understood that my invention is limited to the specific features of construction set forth in the claims.

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

1. An improved railway-tie consisting of

the channel-iron 2, and a wooden block, 4, secured in each end thereof by transverse bolts passing through both sides of the iron and through the blocks, and the said blocks of such thickness as to extend above the edges of the iron, substantially as and for the purpose set forth.

2. An improved railway-tie consisting of a channel-iron, 2, and a block or blocks of wood secured therein by transverse bolts, the said block or blocks being provided with a longitudinal channel in the underside, substantially as and for the purpose set forth.

3. An improved railway-tie consisting of a channel-iron, 2, provided with one or more holes, 9, in the bottom, and a block or blocks of wood secured therein by transverse bolts, the said block or blocks being provided with a longitudinal channel in the under side, substantially as and for the purposes described.

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Witnesses:

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