

No. 891,164.

PATENTED JUNE 16, 1908.

W. I. F. HARDEN.

RAILWAY TIE.

APPLICATION FILED AUG. 27, 1907.

Fig. 1.

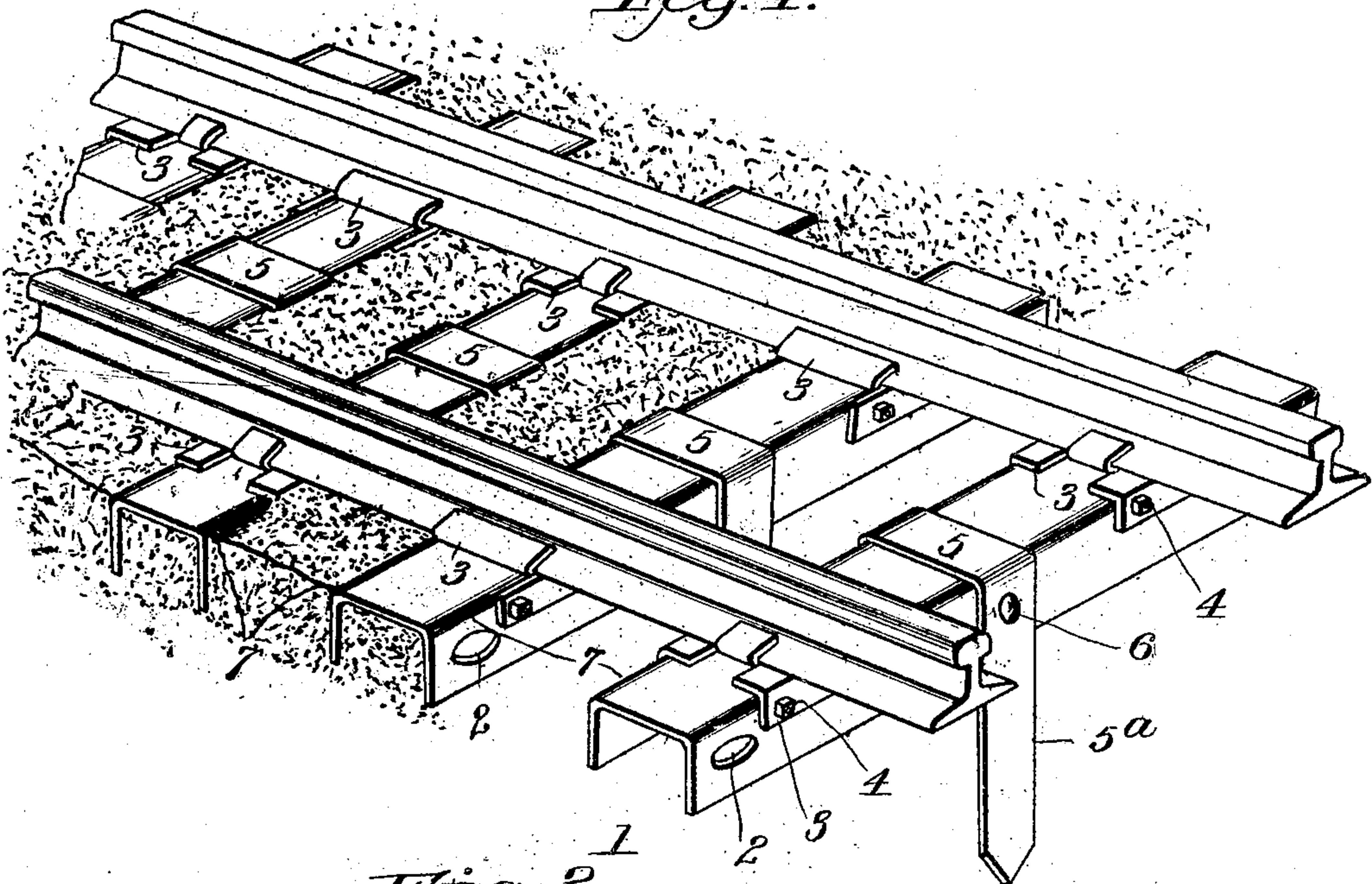


Fig. 2.

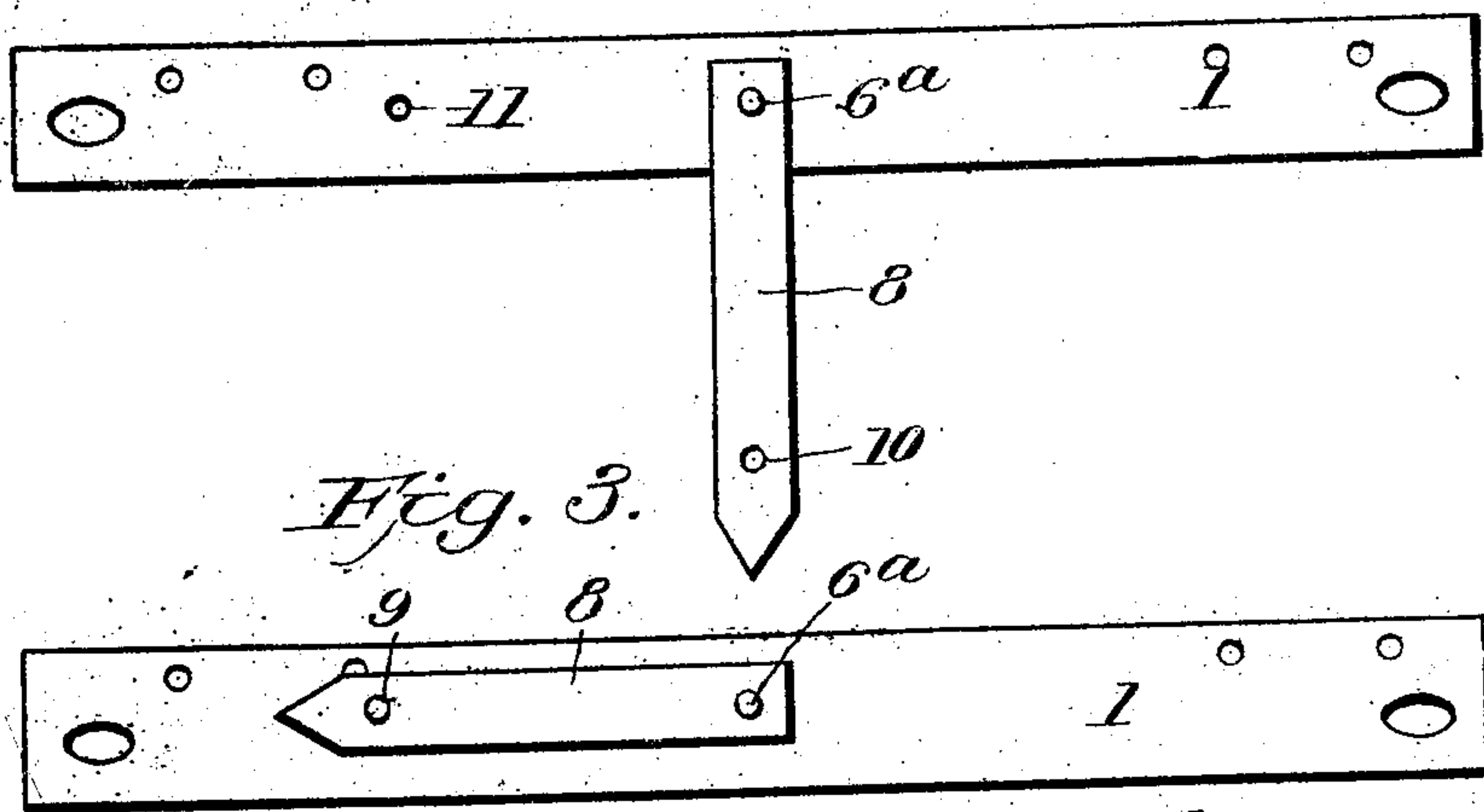
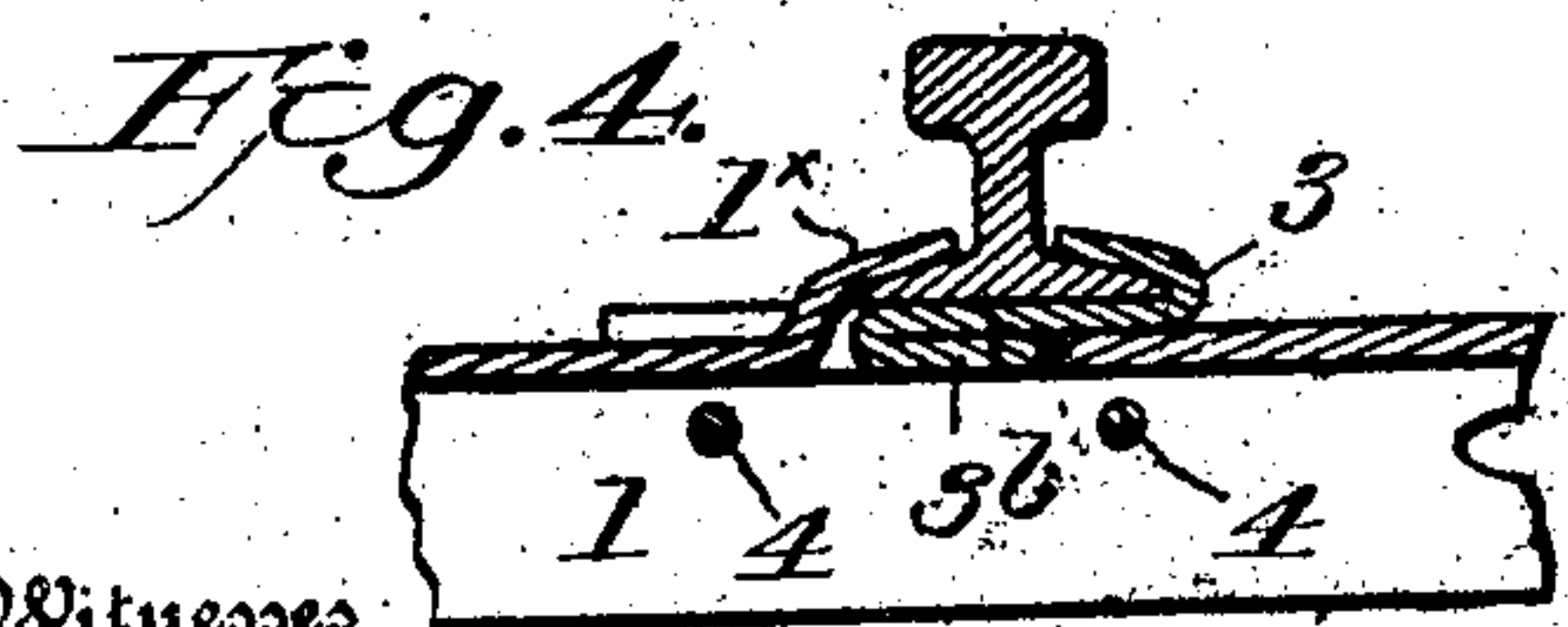
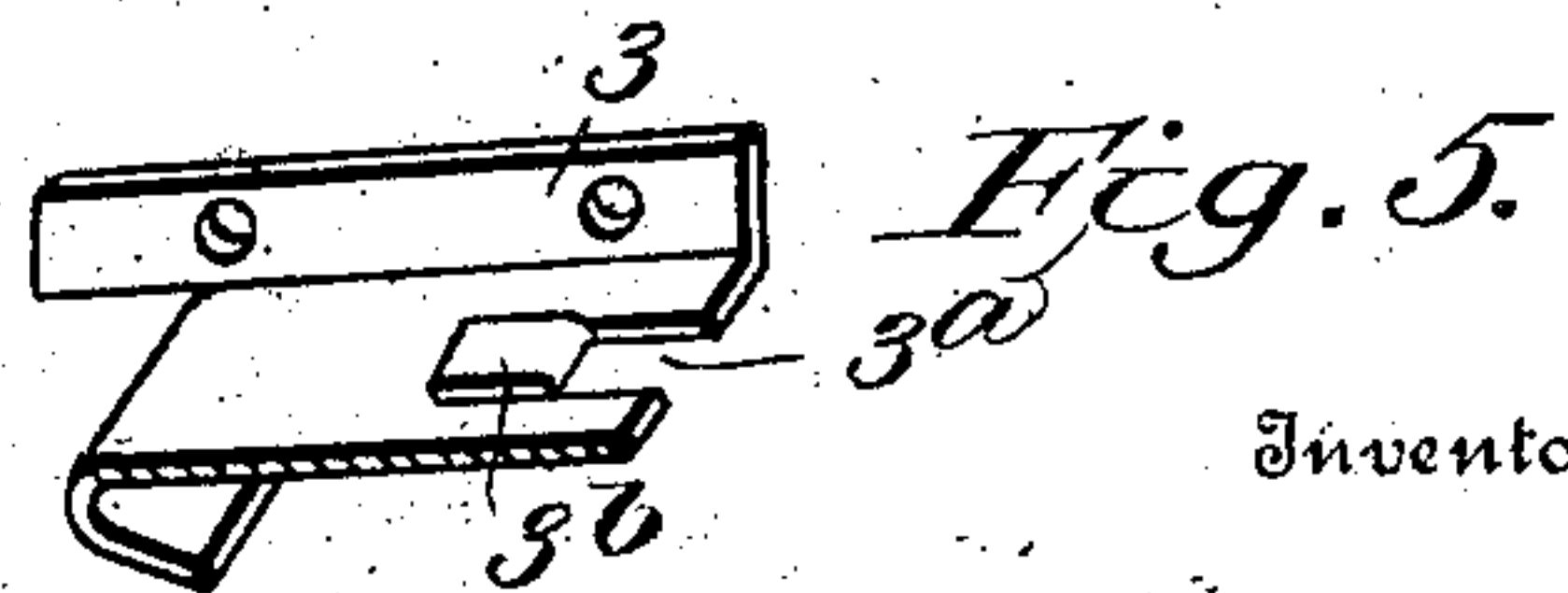


Fig. 3.



Witnesses

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UNITED STATES PATENT OFFICE.

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RAILWAY-TIE.

No. 891,164.

Specification of Letters Patent.

Patented June 16, 1908.

Application filed August 27, 1907. Serial No. 390,341.

To all whom it may concern:

Be it known that I, WILLIAM I. F. HARDEN, a citizen of the United States, residing at Washington, District of Columbia, 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.

My invention relates to railway ties.

It is designed as an improvement on the tie covered by my U. S. Patent No. 833,048, dated October 10, 1906. In the present and more modern construction, I cut off the lateral base extensions or flanges because it makes the tie more economical of constructions by any of the well known processes such as open hearth, rolling, hydraulic or drop forging. The weight of the tie is reduced so that it will cost less for transportation. By dispensing with the side extensions shown in the patent, the tie is rendered self ballasting and may be tamped at both sides and ends.

Another object of my present invention is to prevent the tie from rocking and maintain it in permanent upright position.

The invention consists of the features of construction and combinations of parts hereinafter described and specified in the claims.

In the accompanying drawings, illustrating the preferred embodiment of my invention: Figure 1 is a perspective view of a section of railroad track embodying my invention, part of the ballast or road bed being removed. Fig. 2 is a side view of a tie equipped with a modified form of steadying pin. Fig. 3 is a similar view showing the pin turned up to a horizontal position and secured along the side of the tie. Fig. 4 is a broken vertical section of one end of the tie showing the construction and arrangement of the rail gripping plate, and Fig. 5 is a detailed perspective view of said gripping plate.

Referring particularly to Fig. 1 of the drawing, 1 designates the ties, each of which is provided with openings 2 in its sides near its ends for the purpose of convenient handling and into which picks or other tools may be inserted to draw out said tie from below the rails after it has been released therefrom or to pull a new tie in place. Any suitable construction of device for securing the rails to the ties may be employed but I prefer to use gripping plates 3 which are made somewhat similar to those shown in my Patent

No. 833,048. The present plate differs from that shown in the patent in that the piece of metal which was before cut out to form the slot 3^a through which the lip 1^x on the tie extends, instead of being cut entirely out and wasted is only severed along its edges and is bent back under the plate, as shown at 3^b in Figs. 4 and 5. This turned under portion is made to fit the slot 1^c formed in the tie by cutting the lip 1^x, so that the flange of the rail which extends below said lip is supported by a double thickness of the gripping plate. I have concluded to use a fastening bolt 4 near each end of the flanges of said gripping plates whereas in my patent referred to a bolt is shown applied to only one end of said plates. To prevent the tie from rocking and one side sinking lower than the other, I place a staple 5 astride the tie and drive it into the road bed until the top or horizontal portion of said staple comes in contact with the top of the tie. A bolt 6 is then passed through the sides of the tie and of said staple thereby securing them firmly together. Said bolt 6 as well as the bolts which secure the gripping plates give additional strength to the sides and center of the tie and prevent it from buckling, doubling or spreading. The prongs 5^a of the staple are preferably made of broad plates which are arranged flat against the sides of the tie and extend well down into the road bed whereby they hold the tie firmly in place. Said staples or braces are placed in position while the final tamping is being done. It will be noted that the bends or corners in the metal forming the tie are rounded as at 7, instead of being brought to sharp edges. This renders the ties easier to make and stronger. The corners of the rail gripping plates and of the staples are also rounded to conform to the corners of the tie. It is evident that the weight of passing trains will force or press the ties more firmly into the road-bed by reason of the open under sides of said ties whereby they will after a short time become very solid. There is nothing about the ties or the staples to interfere with tamping them thoroughly. The form of tie shown and described herein is especially applicable for covering old wooden ties on elevated and other railways.

In Figs. 2 and 3, 1^a designates the tie constructed the same as shown in Fig. 1. Instead of the staple shown in Fig. 1, however, two separate pins 8 are employed, one being

driven down at each side of the tie and both being secured to said tie by a single transverse bolt 6^a. As shown in Fig. 3, each pin may be turned horizontally and secured
5 along the side of the tie by means of a temporary bolt 9 passed through holes 10 and 11 formed respectively in the pin and the side of the tie. This insures the pin and tie being always assembled and at the same time they
10 are compact for shipping.

While I have shown the staples and pins only applied to the center of the ties, two or more may be used on each tie and positioned differently without departing from the spirit
15 of my invention.

I claim:

1. The combination, with a tie, of a staple arranged astride said tie and secured at both sides thereto by a single bolt, said staple

adapted to be driven into the road bed for 20 the purpose specified.

2. The combination, with a tie, of a staple arranged astride and secured to said tie, the prongs of said staple comprising broad plates adapted to be driven into the road bed to 25 prevent the tie from rocking.

3. The combination with a tie angular in cross section and open at the bottom, of a staple arranged astride and secured to said tie, the prongs of said staple comprising 30 broad plates adapted to be driven into the road bed to prevent the tie from rocking.

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

WILLIAM I. F. HARDEN.

Witnesses:

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VIOLET E. BURNER.