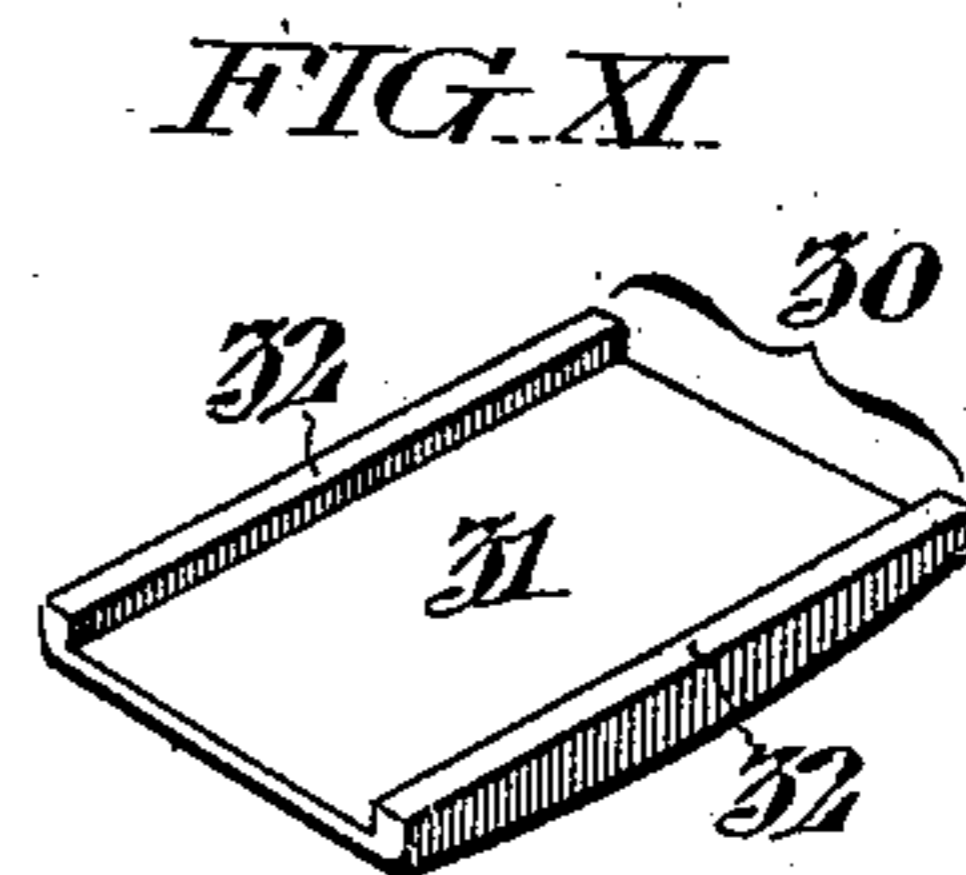
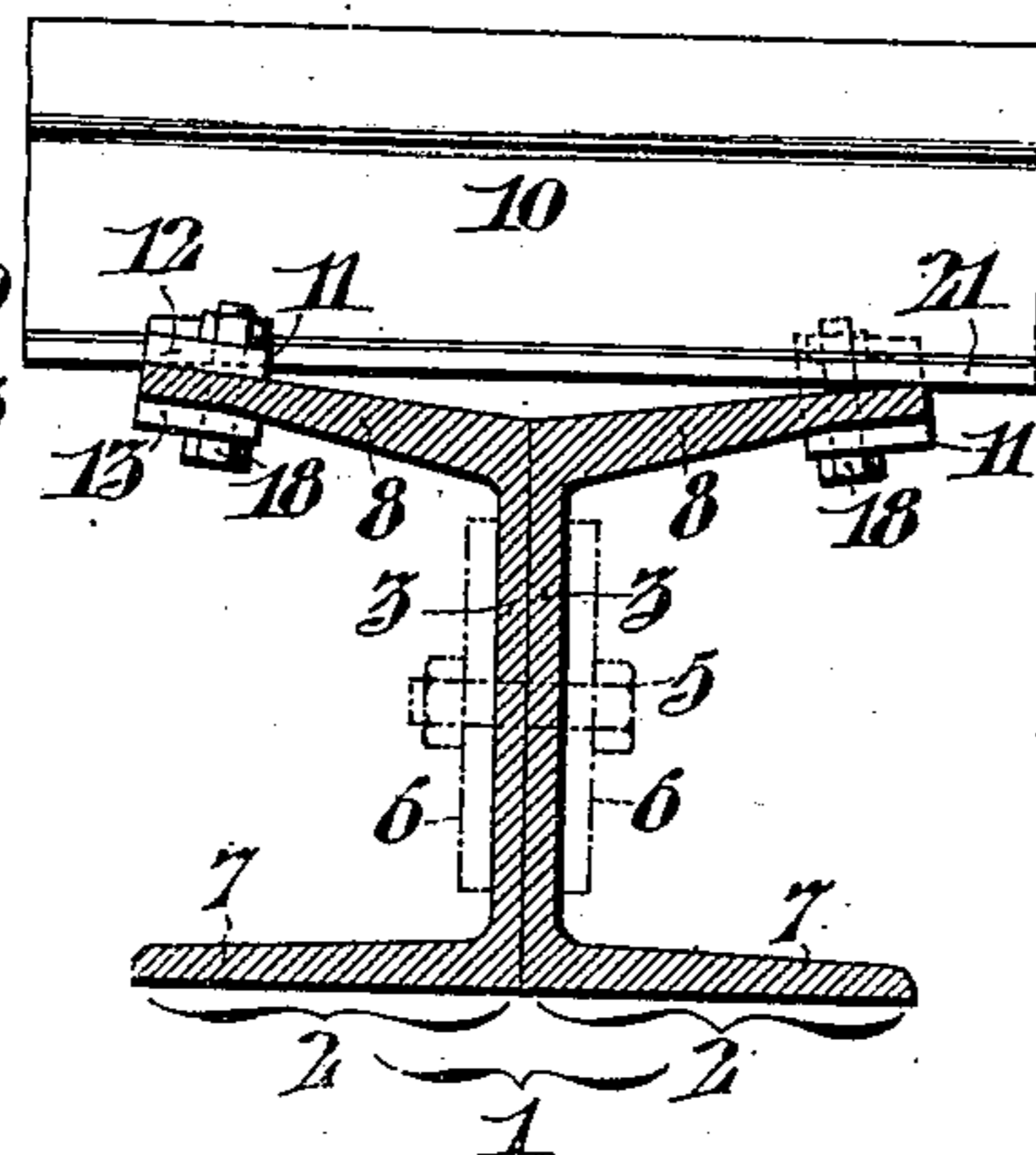
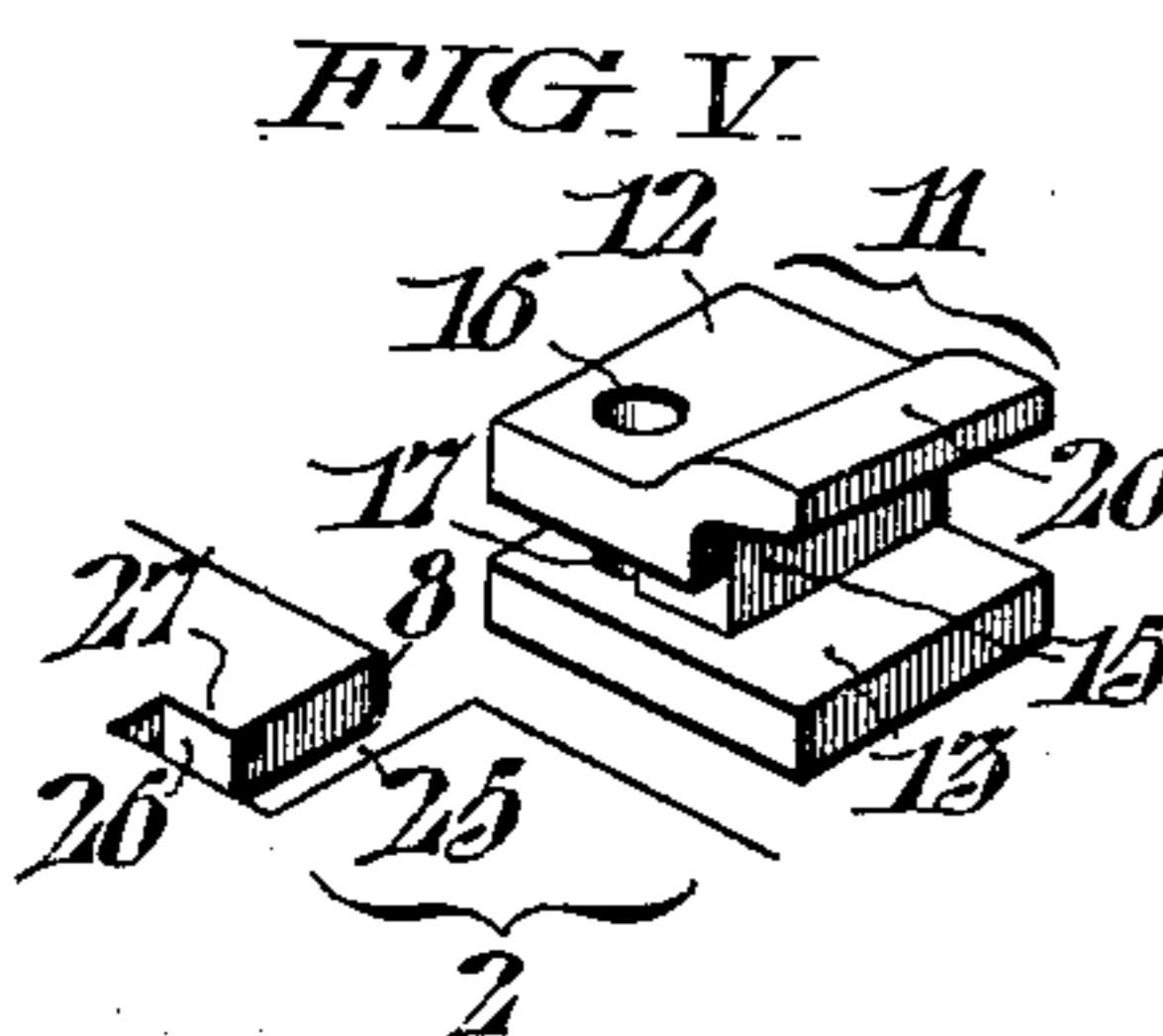
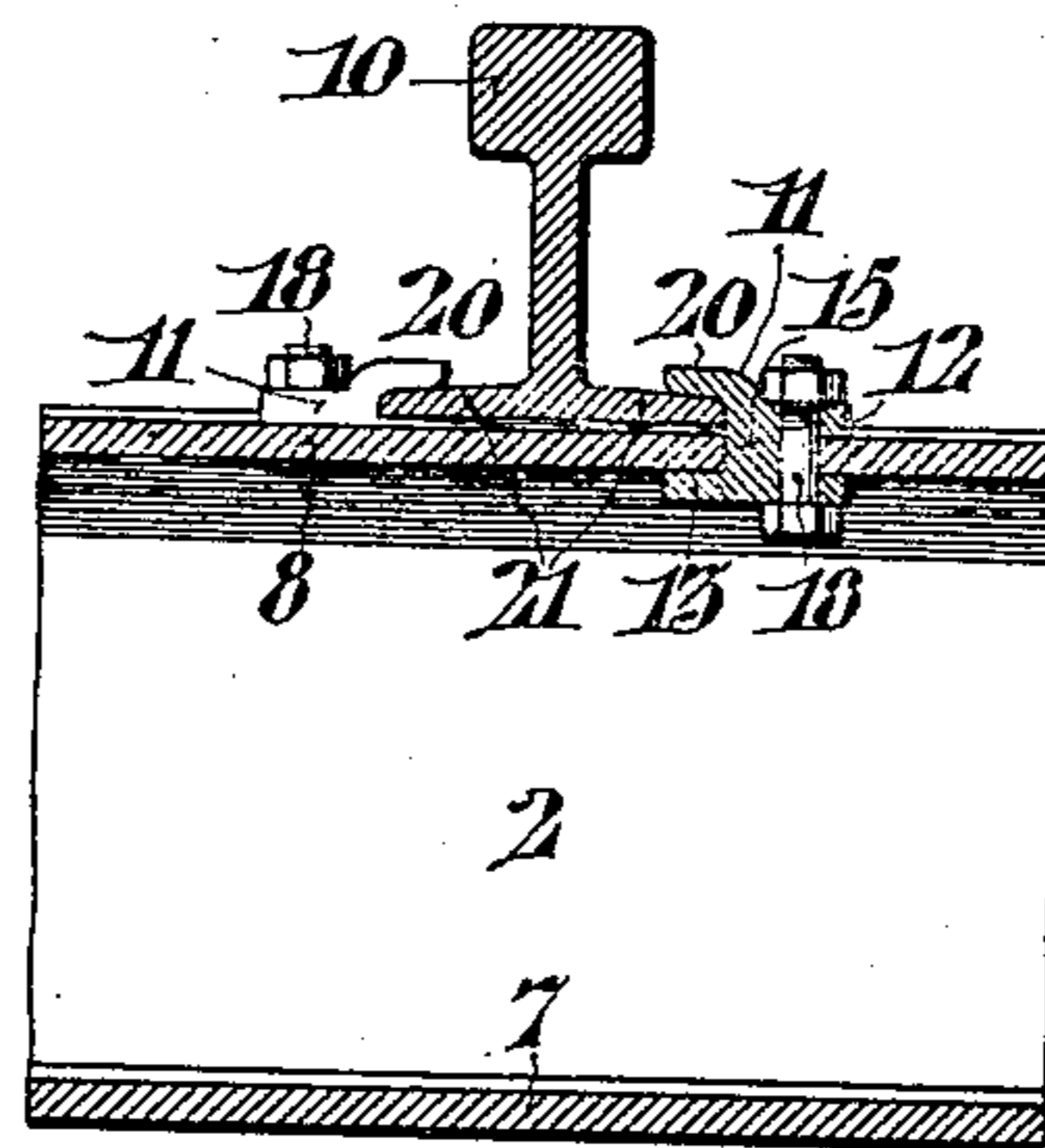
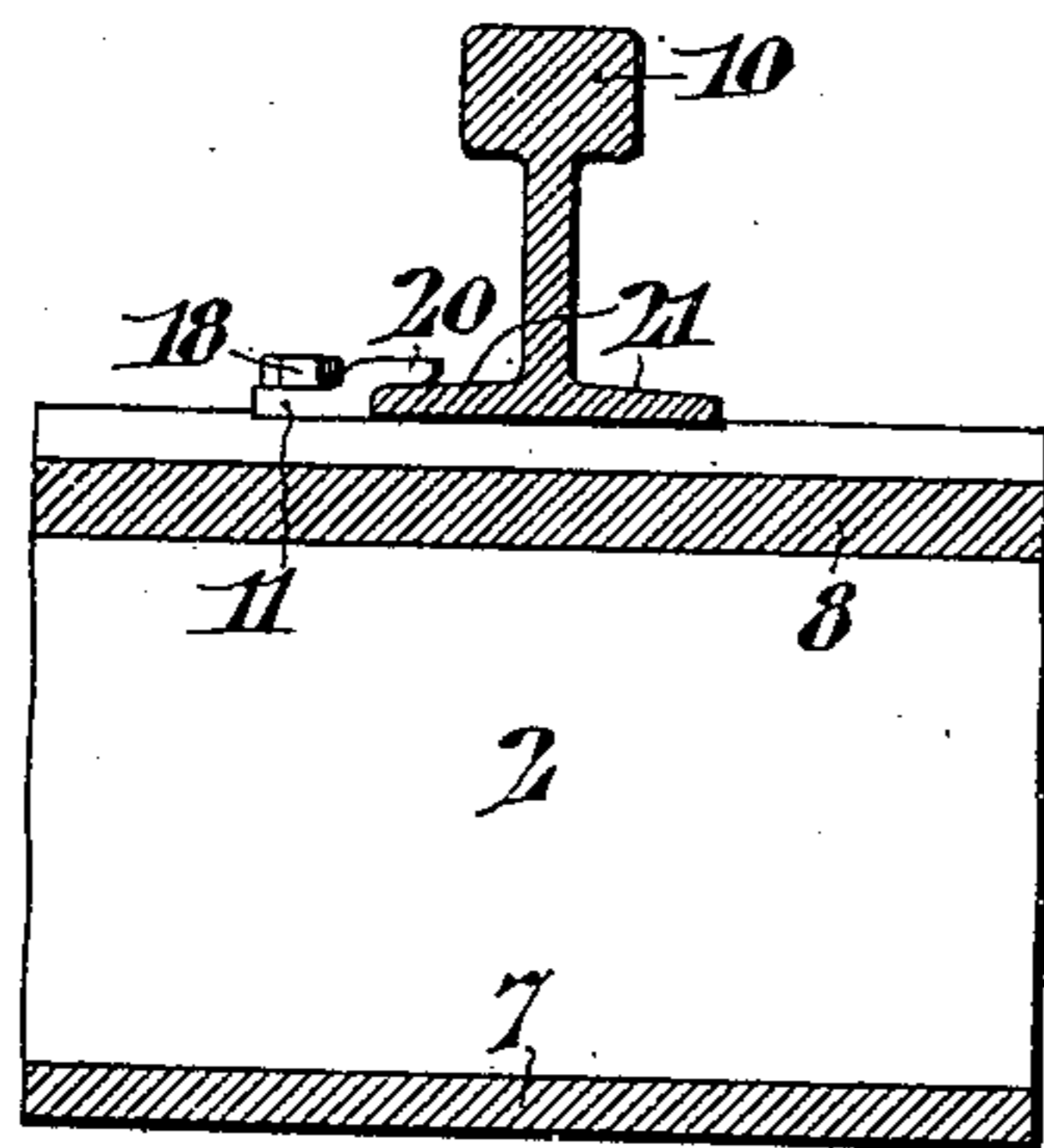
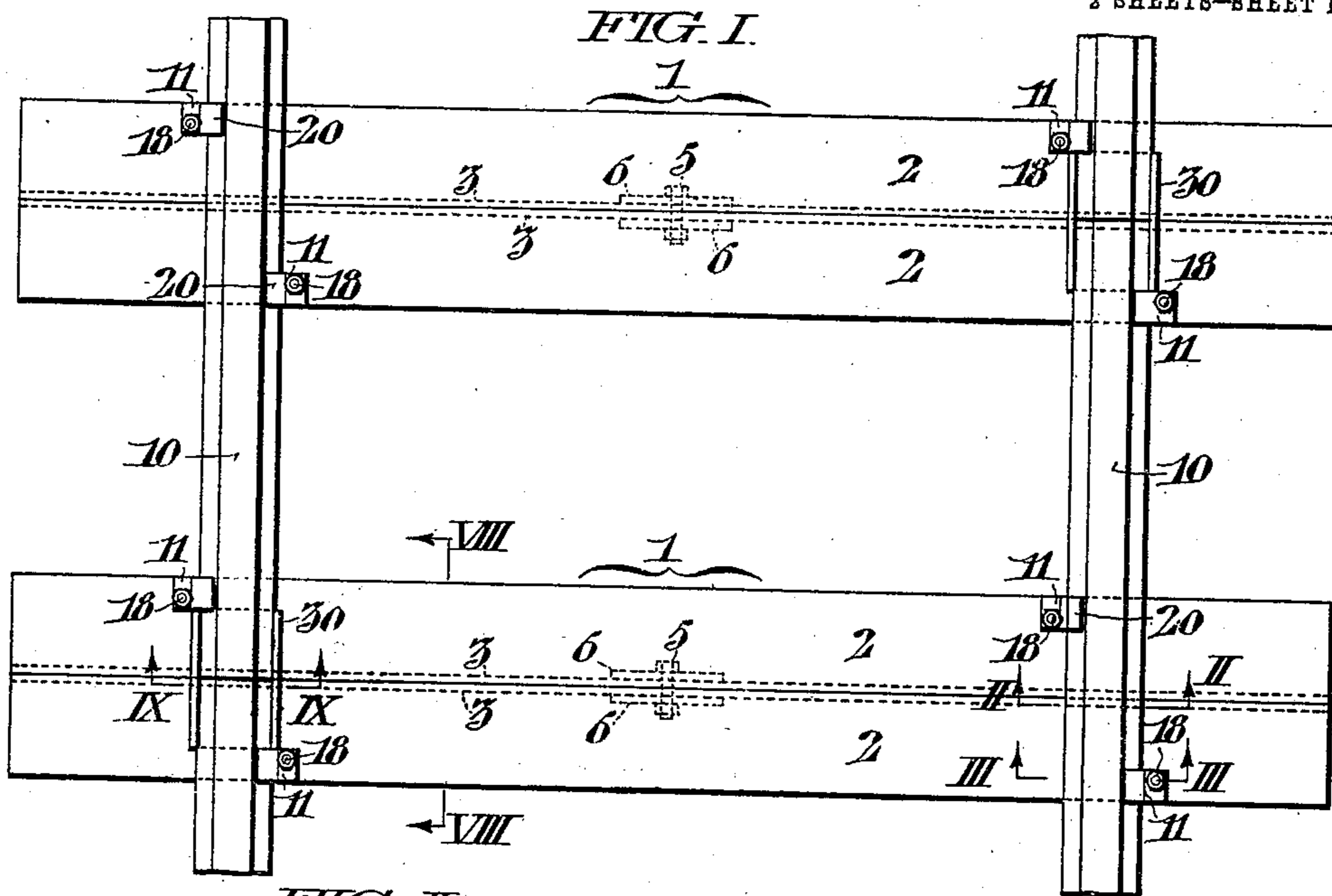


R. SEIDELINGER.
METALLIC RAILWAY TIE.
APPLICATION FILED APR. 18, 1910.

991,756.

Patented May 9, 1911.

2 SHEETS—SHEET 1.



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Inventor
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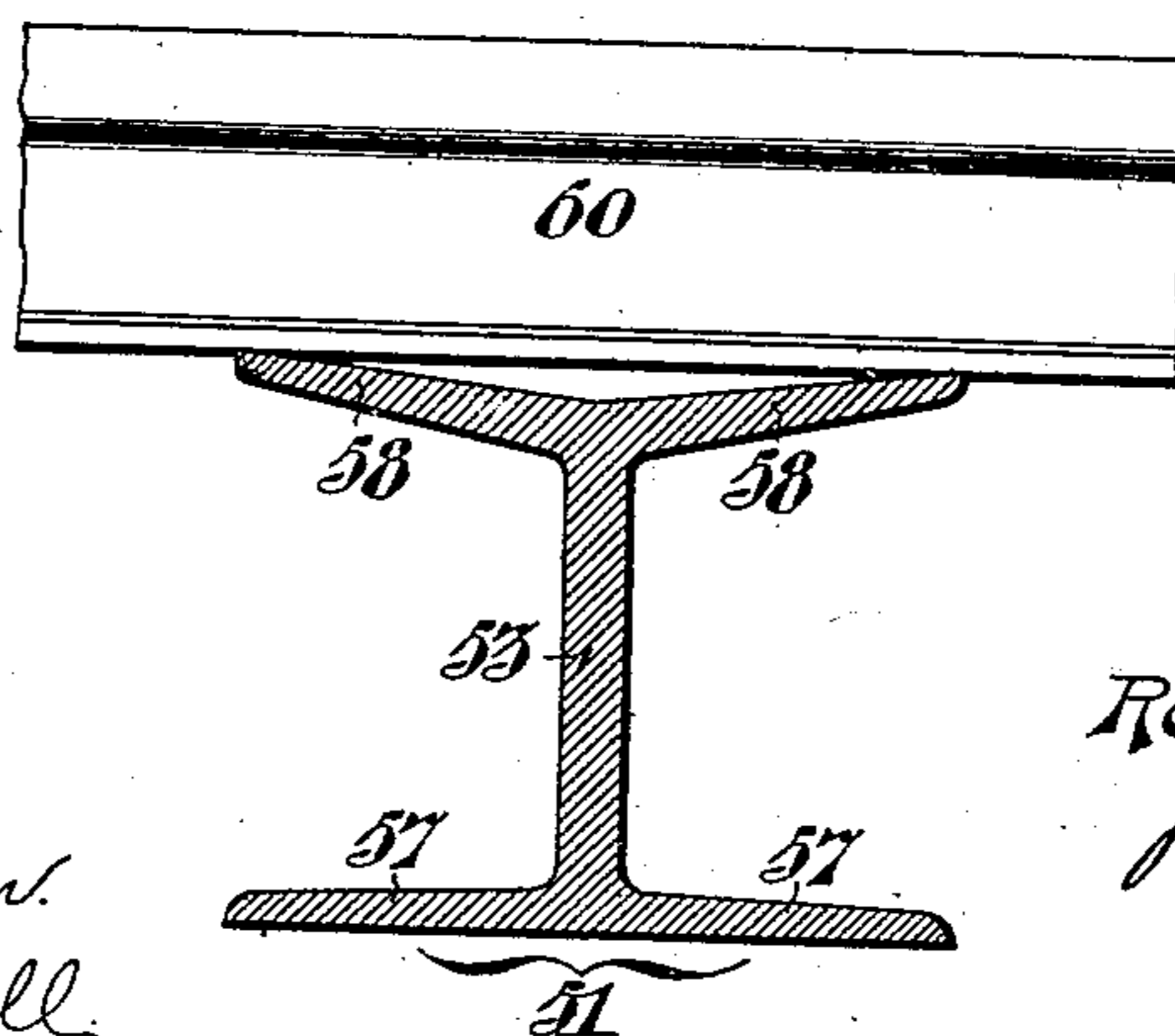
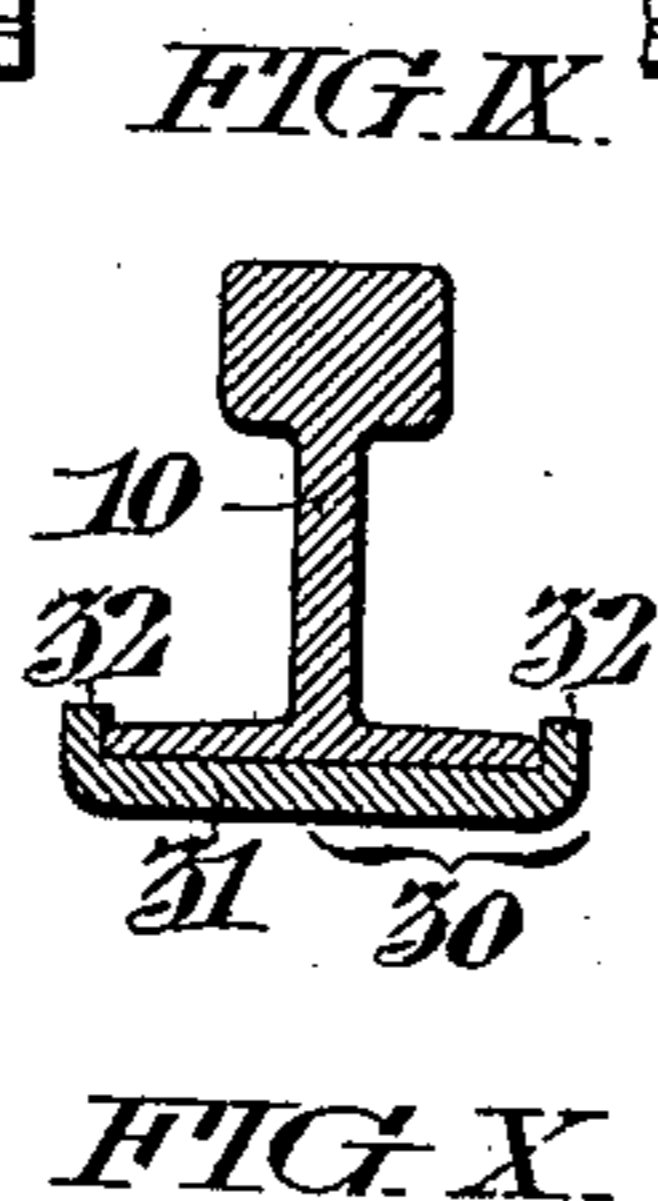
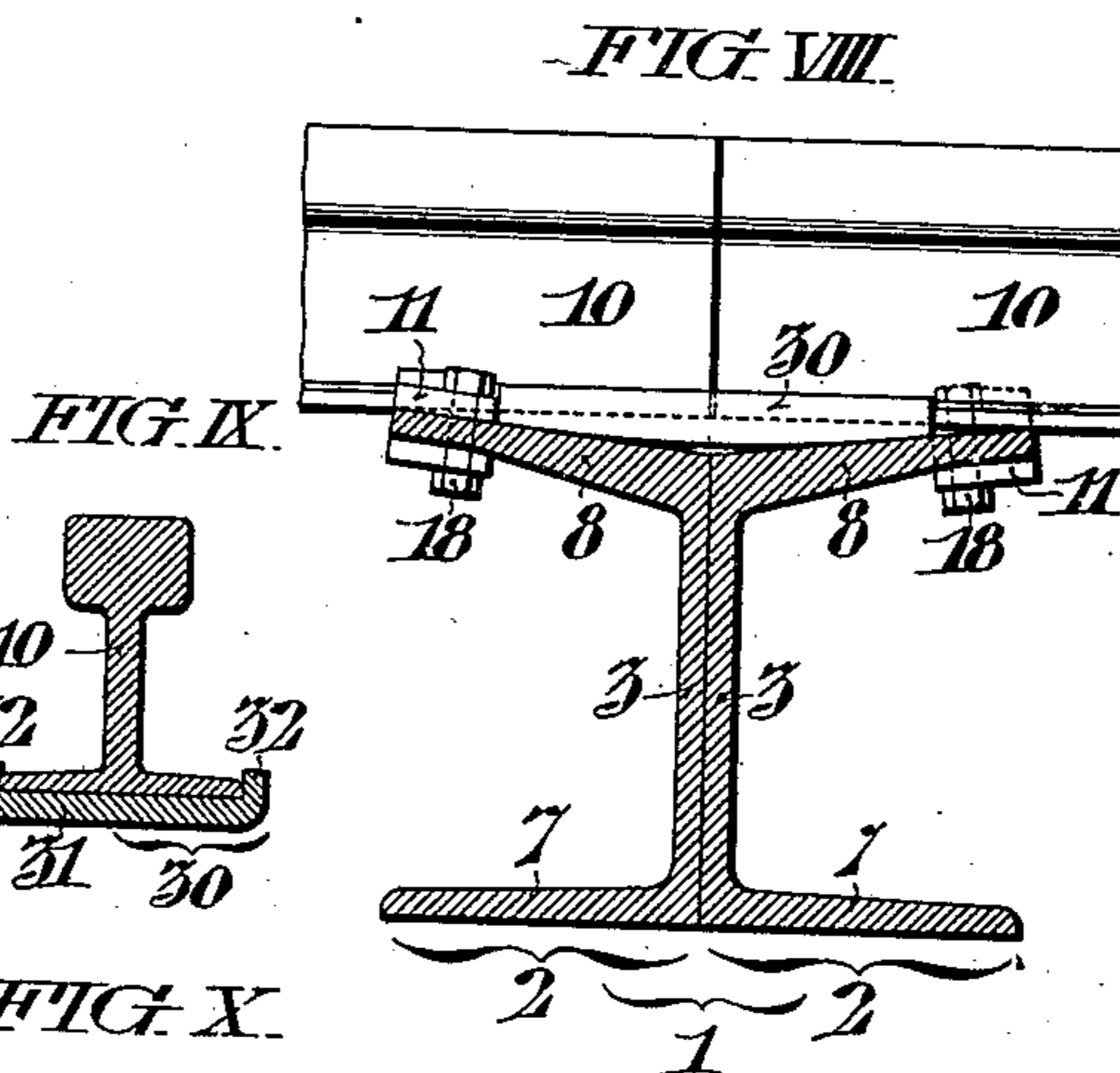
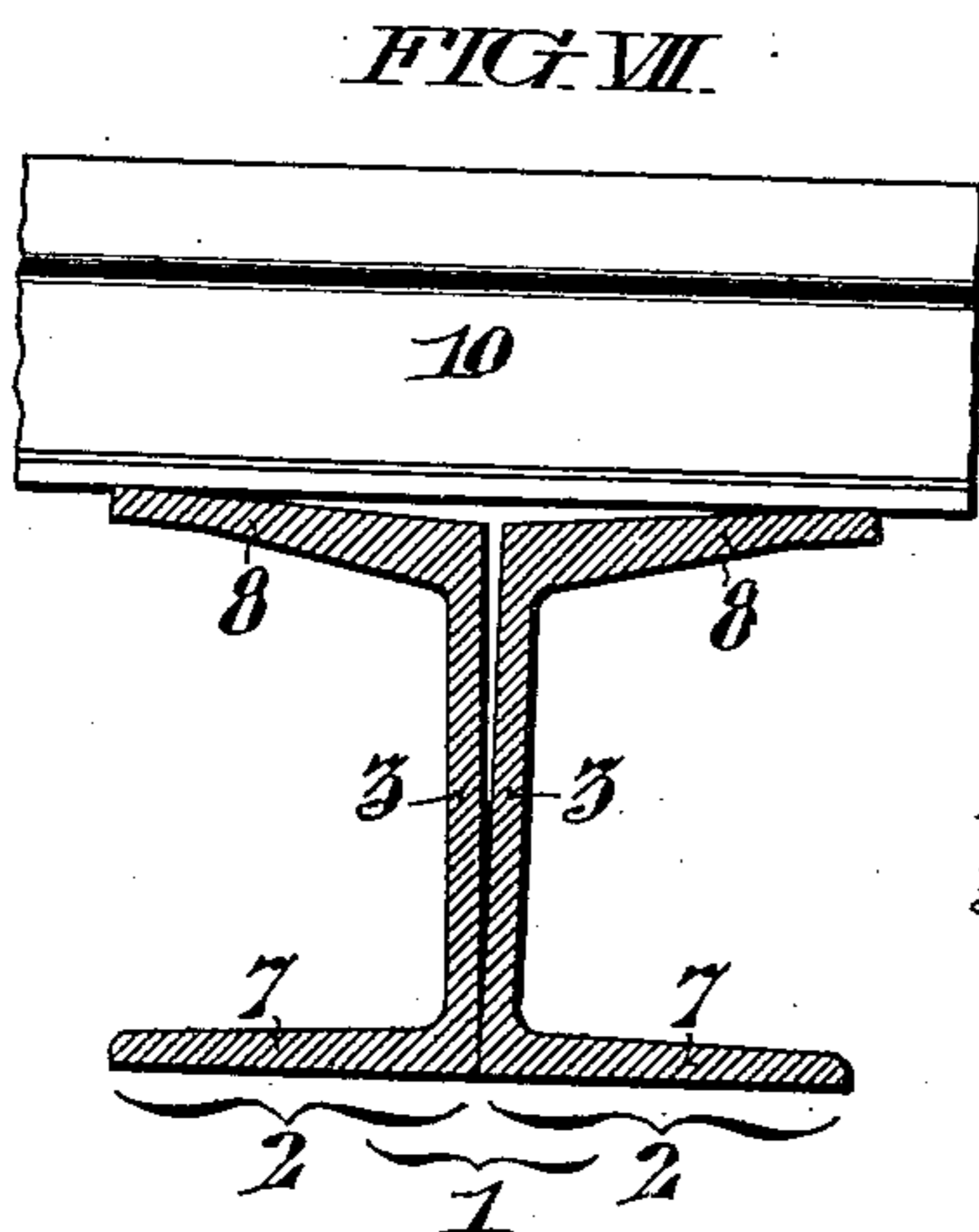
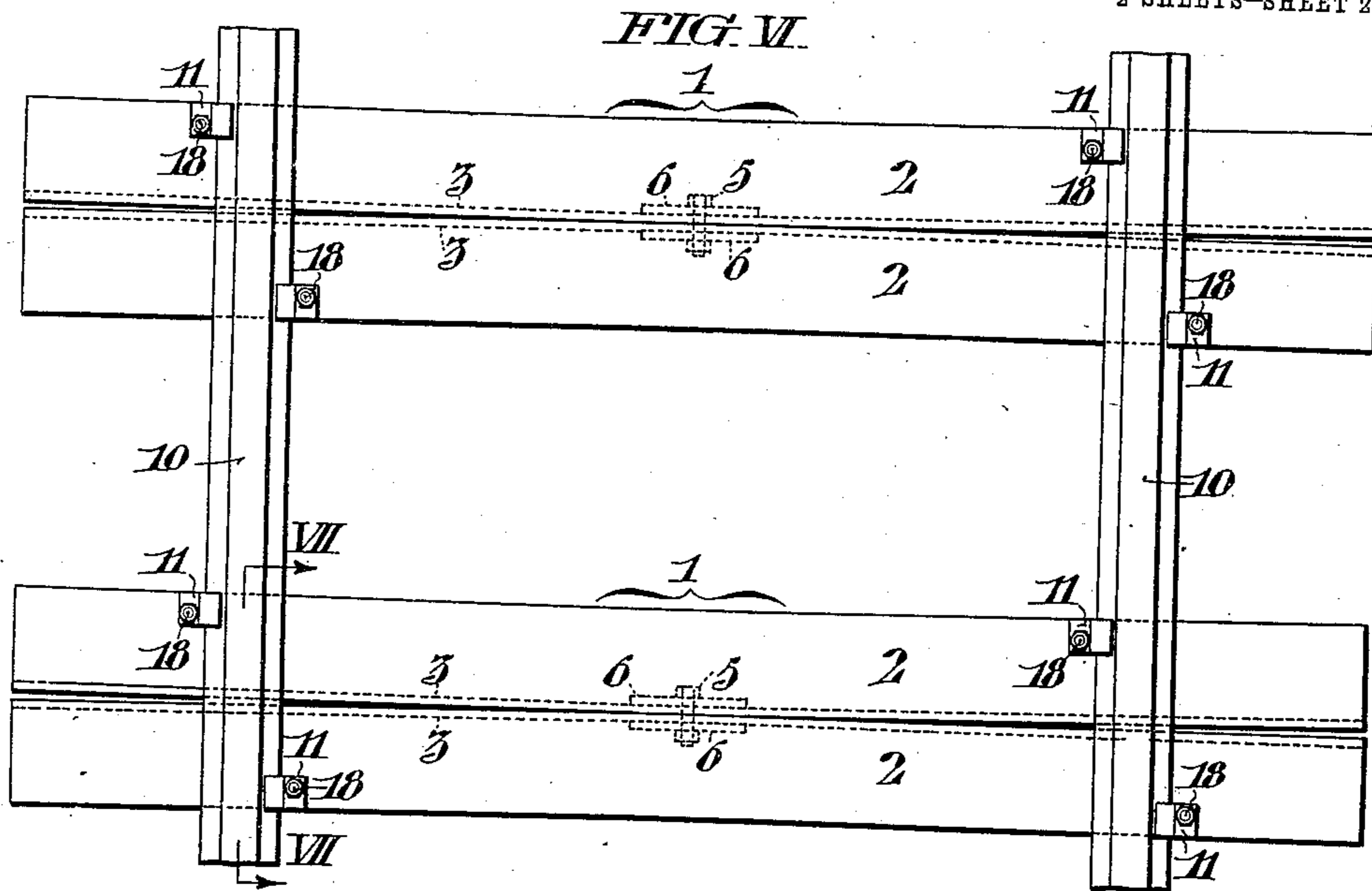
Attorneys.

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Patented May 9, 1911.

2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

ROBIE SEIDELINGER, OF WILMINGTON, DELAWARE.

METALLIC RAILWAY-TIE.

991,756.

Specification of Letters Patent.

Patented May 9, 1911.

Application filed April 18, 1910. Serial No. 556,127.

To all whom it may concern:

Be it known that I, ROBIE SEIDELINGER, a resident of Wilmington, in the county of Newcastle and State of Delaware, have invented certain new and useful Improvements in Metallic Railway-Ties, whereof the following is a specification, reference being had to the accompanying drawings.

The invention relates to new and useful improvements in metallic ties and more especially to ties of this character which are constructed so as to afford a yielding support for the rail.

An object of the invention is to provide a metallic tie which shall yield readily to the load upon the rail, but which shall have a maximum strength to support the load.

A further object of the invention is to provide a metallic tie which has a central supporting member for carrying the load and which is also provided with means for yieldingly carrying the load.

A further object of the invention is to provide a tie of the above character with means for slidingly connecting the rail to the tie.

A still further object is to provide a connecting shoe or plate for use in connection with my improved tie, where the ends of the rails meet centrally of the tie.

These and other objects will in part be obvious and will in part be hereinafter more fully described.

In the drawings which show by way of illustration one embodiment of the invention; Figure I, is a plan view showing two of my improved ties and the rails connected therewith. Fig. II, is a sectional view taken on the line II, II of Fig. I. Fig. III, is a similar view taken on the line III, III of Fig. I. Fig. IV, is a cross section through one of the ties near the center thereof and showing in dotted lines the connecting bolt and supporting plates. Fig. V, is a perspective view of a portion of a tie and one of my improved locking blocks for securing the rail to the tie, showing the parts in separated position. Fig. VI, is a view similar to Fig. I, showing the position of the members of my improved tie when under load. Fig. VII, is a section through the tie on the line VII, VII, of Fig. VI. Fig. VIII, is a section on the line VIII, VIII, of Fig. I. Fig. IX, is a section through the rail and the connecting shoe or plate as indicated at IX, IX, in Fig. I. Fig. X, is a

section through a tie, showing the rail supported thereon, and showing a modified form of the invention. Fig. XI, is a perspective view of the connecting shoe or plate.

In carrying out my invention, I have provided a metallic tie which is in the form of an I-beam as clearly shown in Figs. IV, VII, and VIII. Said I-beam 1, is composed of two E-beams 2, 2, placed with their webs 3, 3, together and preferably secured by a bolt 5, passing through the webs centrally between the ends of the tie and preferably midway between the flanges of the beams.

The bottom flanges 7, 7, are in line and form a flat base for the tie. The top flanges 8, 8, are inclined upwardly toward their outer ends as clearly shown in Figs. VI and VII. The rail 10, rests on the outer edges of the flanges 8, 8, as clearly shown in the above mentioned figures.

As a means for securing the rail to the tie, I have provided a locking block 11, which consists of a body portion 12, a lower flange 13, and an upper flange 20. The tie (see Fig. V) is slotted at 25 at right angles to the edge of the tie, and a cross slot 26, substantially parallel with the edge of the tie forms a locking projection 27.

The flanges 13, and 20, are spaced by a neck portion 15, which engages and fits within the slot 25. The body portion 12, is provided with apertures 16, and 17, through which the locking bolt 18, may be inserted, which bolt passes through the slot 26, and engaging behind the projection 27, will prevent the block 11, from being withdrawn from the tie.

The flange 20, is slightly inclined and engages the base flange 21, of the rail 10. I have preferably provided each tie with a locking recess so disposed that the locking block will engage the rail on opposite sides and at each side of the tie. These locking blocks have a sliding engagement with the rail and allow a sliding movement between the rail and the flange of the tie. Under no load, the webs 3, 3, of the E-beams are in contact throughout their full length and the top flanges 8, 8, are at an inclination to the horizontal and base flange of the rail, as clearly shown in Fig. IV. Under load, however, the flanges 8, 8, yield and the webs 3, 3, may also yield as shown in Fig. VII, by separating at their upper outer ends. The

bolt 5, will operate to hold the central portions of the E-beams together and the line of yielding of the web will extend from the bolt downward toward the outer end of the tie substantially to the lower edge of the web as shown in Fig. VII.

In Fig. X, I have shown my improved tie as formed of one solid piece and in the shape of an I-beam 51, with the base flanges 57, and a central web 53. The upper flanges 58, are inclined upwardly toward their outer ends and the rail 60, normally rests on the outer edges of the flanges 58. Under load the flanges will yield, but under excessive load, the weight will be brought directly onto the web 53, which will prevent any possible collapse of the tie. The same is true of the construction shown in the other figures. Under excessive load the central web will receive the weight and prevent the breaking of the yielding parts.

When the rails meet centrally of the tie, I prefer to use a connecting shoe or plate 30, having a body portion 31, which receives the base flange of the rail and upwardly projecting side portions 32, which extend up along the side of the base flange of the rail, and hold the two rails in alinement. The connecting shoe or plate is inclined slightly on its under face to conform in a measure to the inclination of the flanges of the supporting tie. This connecting shoe or plate not only holds the rails in alinement, but will also prevent relative vertical movement of the ends of the rails.

In the use of my tie it is intended that said tie will be embedded in the road bed construction, and the plates 6, 6, secured by the bolt 5, will prevent lateral creeping of the tie in the road bed.

It will be obvious that minor changes in the details of construction may be made, without departing from the spirit of my invention.

Having thus described my invention, I claim:

1. A metallic railway tie comprising a body portion, composed of two separate members in the shape of E-beams, arranged with their webs together and having their top flanges normally inclined upwardly toward their outer edges, whereby the rail is yieldingly supported by the tie, the top flanges of said rail having recesses formed therein; and a locking block adapted to engage said recess, said block having a flange extending underneath the flange of the tie, and a second flange adapted to slidably engage the base flange of the rail.

2. A metallic railway tie comprising a body portion composed of two separate members in the shape of E-beams arranged with their webs together, and having their top flanges normally inclined upwardly toward their outer edges, whereby the rail is

yieldingly supported by the tie, the top flanges of said rail having recesses formed therein; and a locking block adapted to engage one of said recesses, said lock having a flange extending underneath the flange of the tie, a second flange adapted to slidably engage the base flange of the rail, and a locking bolt adapted to be passed through said block and flange of the tie for securing the block to the tie.

3. A metallic railway tie comprising a body portion composed of two separate members in the shape of E-beams arranged with their webs together, and having their top flanges normally inclined upwardly toward the outer edges thereof, whereby the rail is yieldingly supported.

4. A metallic railway tie comprising a body portion composed of two separate members in the shape of E-beams arranged with their webs together and having their top flanges normally inclined upwardly toward the outer edges thereof, whereby the rail is yieldingly supported; and means for slidably connecting the rail to the outer edges of said flanges.

5. A metallic railway tie comprising a body portion composed of two separate members in the shape of E-beams arranged with their webs together, and having their top flanges normally inclined upwardly toward their outer edges; and means for connecting said webs centrally between the ends of the ties, whereby said webs at each outer end may yield and separate at their upper portions, and provide an additional yielding support for the rail.

6. A metallic railway tie comprising a body portion composed of two separate members in the shape of E-beams arranged with their webs together and having their top flanges normally inclined upwardly toward their outer edges; means for connecting said webs centrally between the ends of the ties, whereby said webs at each outer end may yield and separate at their upper portions, and provide an additional yielding support for the rail; and means for slidably connecting the rail to the outer edges of said inclined flanges.

7. A metallic railway tie comprising a body portion in the shape of an I-beam having its top flanges normally inclined upwardly toward their outer edges, whereby the rail is supported; and a connecting shoe adapted to be supported on the top of said tie, and having flanges for engaging the base flanges of the rail for holding the ends of two adjacent rails in alinement, said shoe having its under face inclined upward from the center thereof toward the outer ends whereby the under face of said shoe conforms to the upper face of the tie.

8. A metallic railway tie comprising a body portion in the shape of an I-beam, hav-

ing its top flanges normally inclined upwardly toward their outer edges, whereby the rail is supported; a connecting shoe adapted to be supported on the top of said tie and having flanges for engaging the base flanges of the rail for holding the ends of two adjacent rails in alinement, said shoe having its under face inclined upward from the center thereof toward the outer ends whereby the under face of said shoe conforms to the upper face of the tie; and

means for slidingly connecting the rail to the flanges of the tie at each end of the connecting shoe.

In testimony whereof, I have hereunto signed my name, at Philadelphia, Pennsylvania, this fifteenth day of April 1910.

ROBIE SEIDELINGER.

Witnesses:

JAMES H. BELL,
E. L. FULLERTON.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
