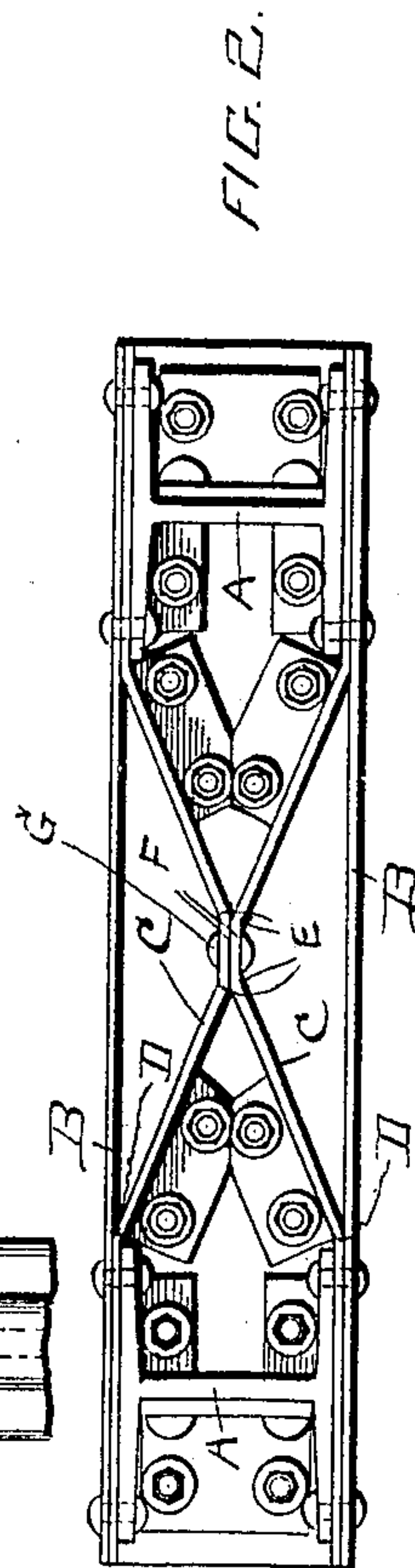
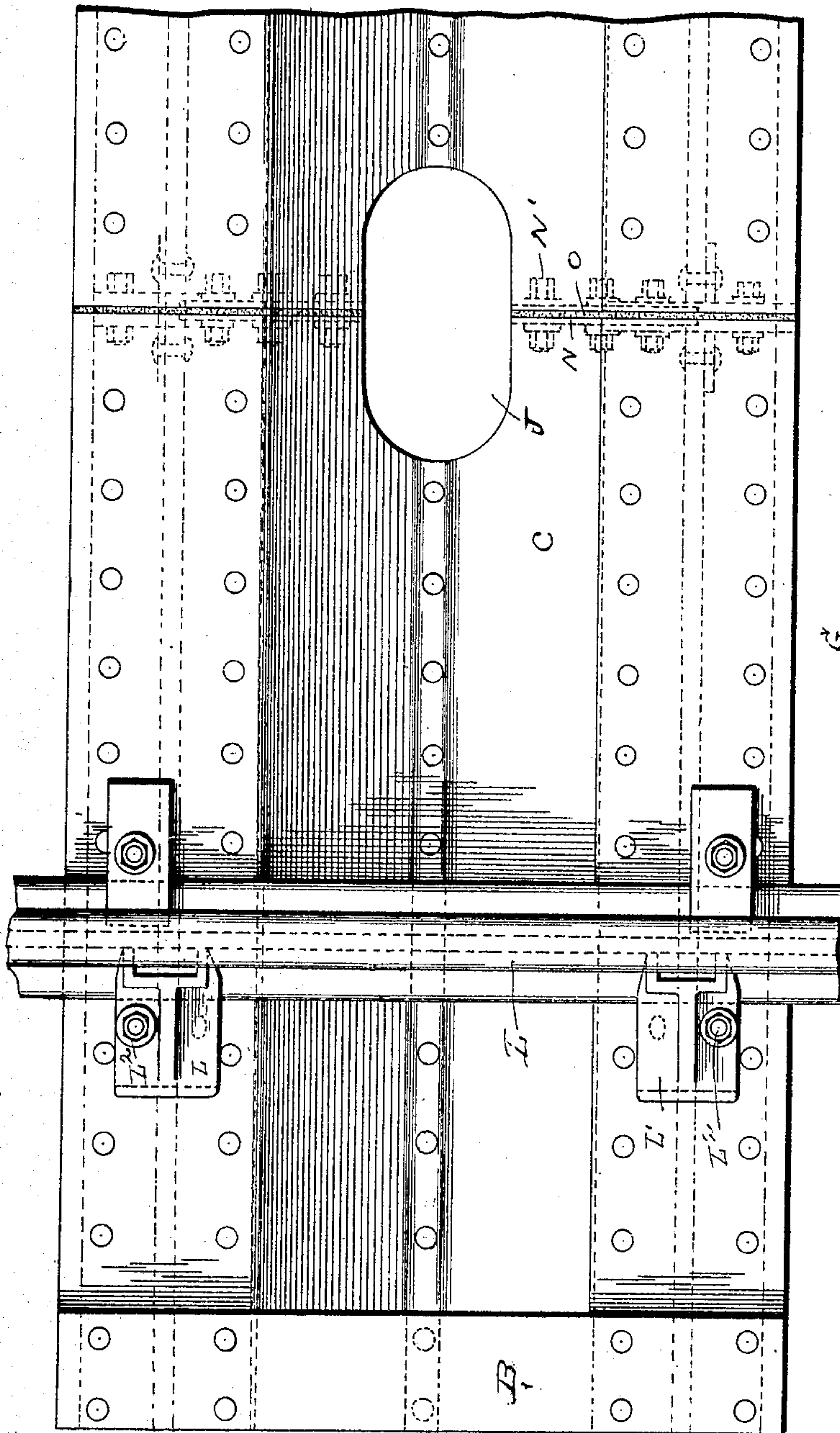


F. H. KINNEY.
METALLIC RAILWAY TIE.
APPLICATION FILED DEC. 12, 1908.

916,451.

Patented Mar. 30, 1909.

2 SHEETS—SHEET 1.



WITNESSES:
H. F. Kyle
A. L. Hough
FIG. 1.

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BY *Francis H. Hough*
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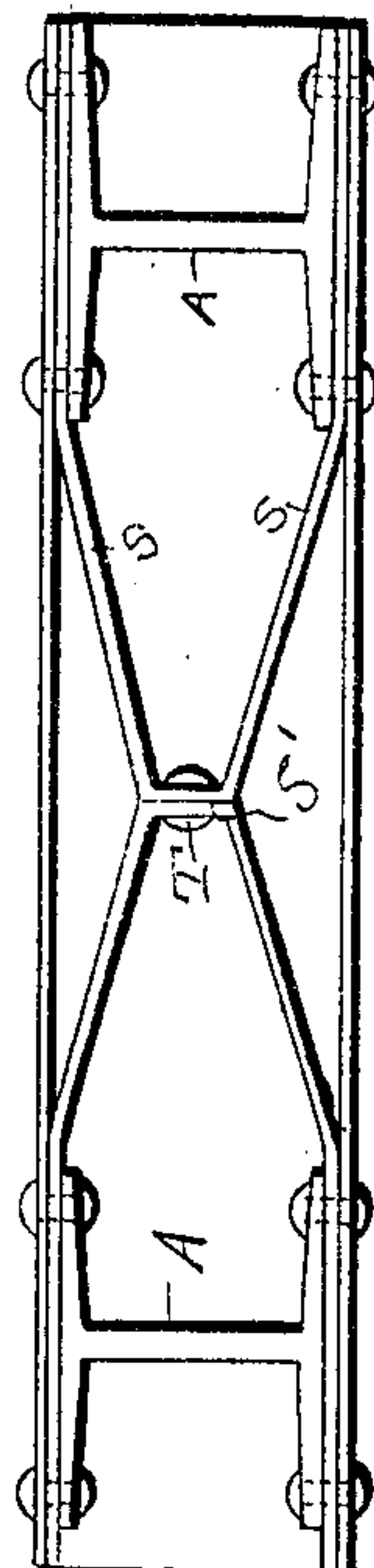
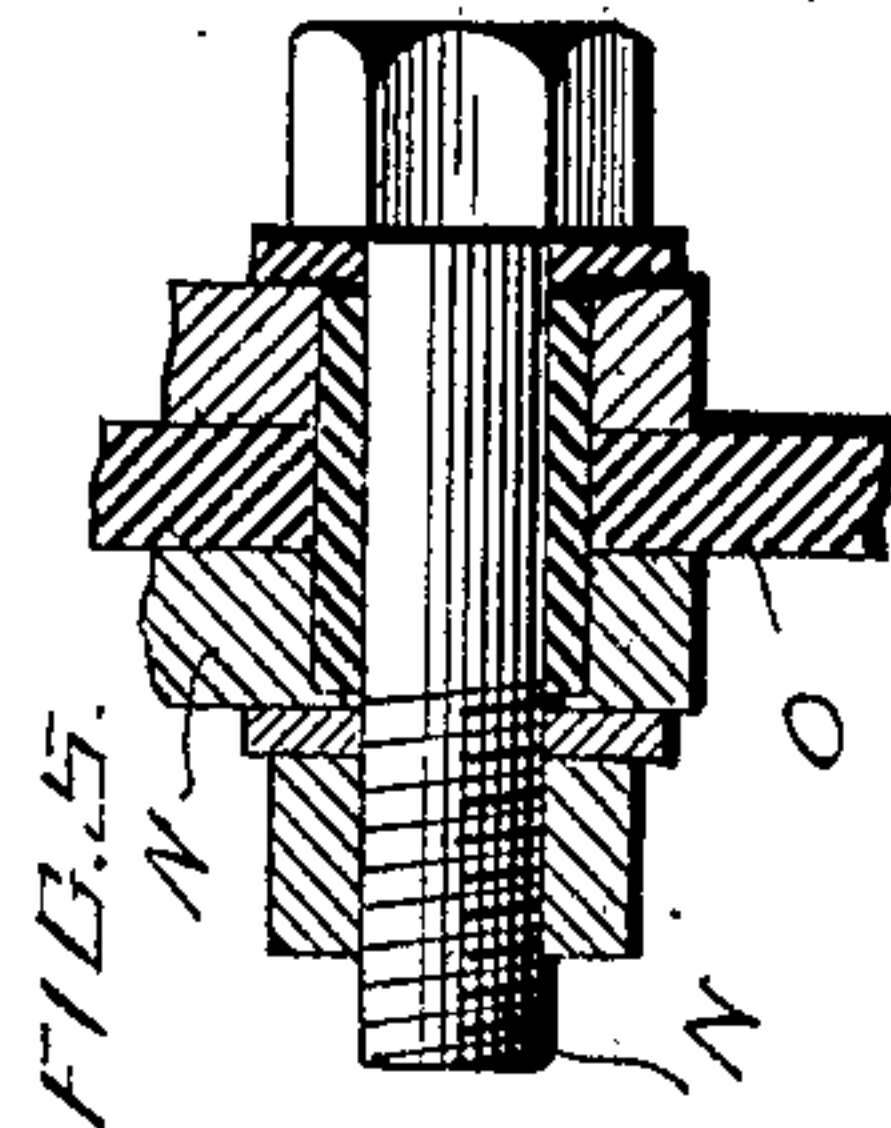
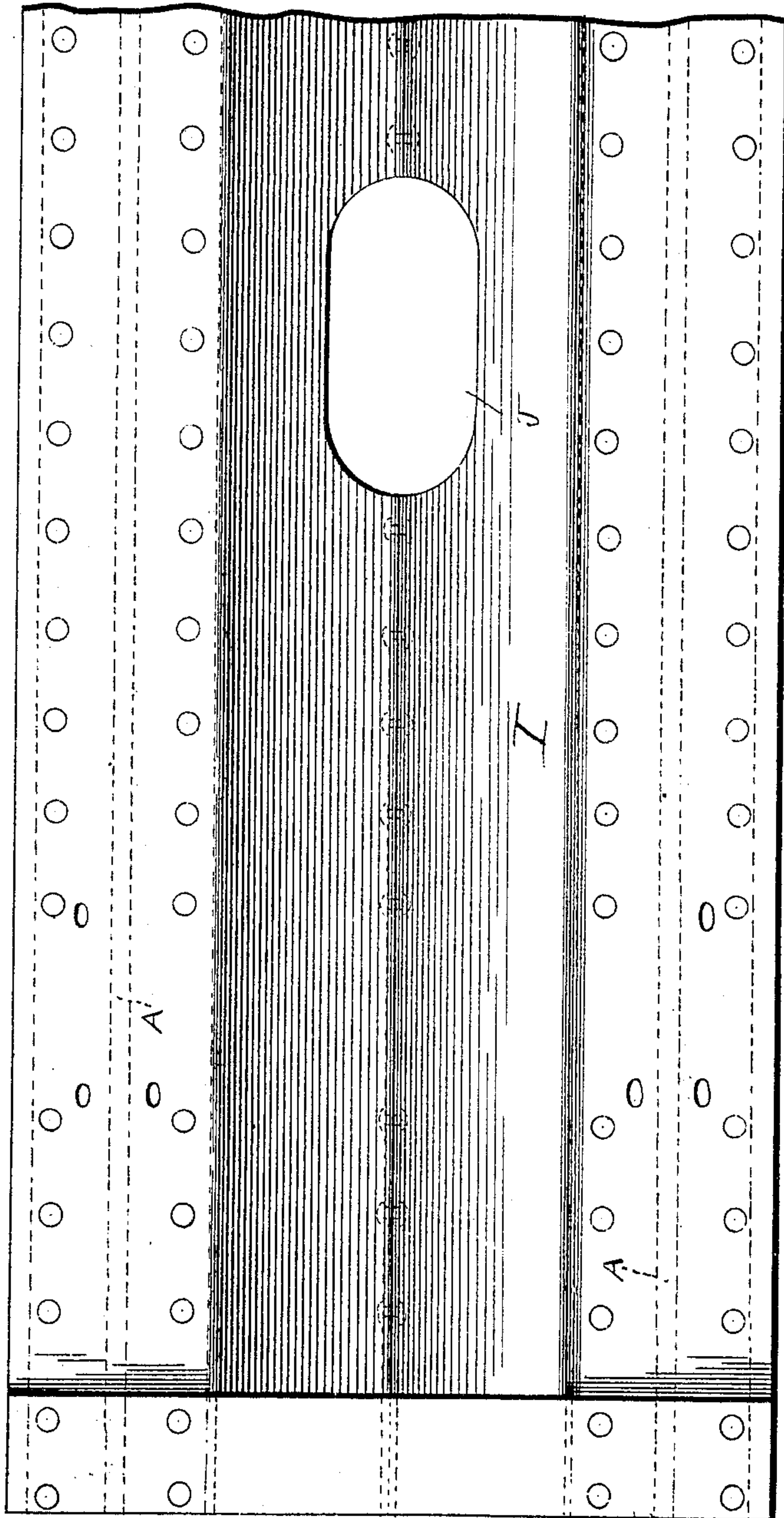


FIG. 4.

WITNESSES:

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A. L. Hough FIG. 3.

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UNITED STATES PATENT OFFICE.

FRANKLIN H. KINNEY, OF HEMLOCK, NEW YORK.

METALLIC RAILWAY-TIE.

No. 916,451.

Specification of Letters Patent.

Patented March 30, 1909.

Application filed December 12, 1908. Serial No. 467,211.

To all whom it may concern:

Be it known that I, FRANKLIN H. KINNEY, a citizen of the United States, residing at Hemlock, in the county of Livingston and State of New York, have invented certain new and useful Improvements in Metallic 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, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to new and useful improvements in metallic railway ties and consists essentially in the formation of the ties in pairs and fastened together by brace strips and so arranged that the ties may be reversed, if desired for any purpose, thus utilizing both of the faces thereof for supporting the rails of a railway.

The invention comprises various details of construction, combinations and arrangements of parts which will be hereinafter fully described and then specifically defined in the appended claims.

My invention is illustrated in the accompanying drawings, in which:—

Figure 1 is a top plan view of one of my improved double ties which is connected together by suitable brace plates and strips. Fig. 2 is an end view of the double tie. Fig. 3 is a top plan view showing a slight modification of the invention. Fig. 4 is an end view of the modified form, and Fig. 5 is a detail sectional view showing the manner of insulating the opposite rail supporting ends of the tie.

Reference now being had to the details of the drawings by letter, A—A designate two I-shaped ties forming the supporting surfaces for the rails. Fastened to the upper and lower parallel faces of said ties are the plates C, C, each of which is bent at an angle at D and brought together adjacent to their longitudinal centers where they are again bent at E, providing two horizontally disposed portions F which are in contact with each other and adapted to be held by means of rivets G, as shown clearly in Fig. 2 of the drawings.

Fastened by rivets or other suitable means to the outer portions of the plates C which are secured to the ties are the cross-pieces B,

preferably located at the ends of the ties, one of said connecting pieces B being shown in top plan view in Fig. 1 of the drawings with its outer edge flush with the ends of the ties. Where it is desired to insulate the opposite rails of a railway track when used in connection with ties embodying my invention, I make the ties in sections and connected together at their middle portions and, in Fig. 1 of the drawings, I have shown the ties made up of sections, the meeting ends of which have flanges N through which bolts N' pass, and intermediate the flanges of the meeting ends are positioned the insulating strips O. In order to allow for drainage of any water which might run down the inclined faces of the connecting brace plates C, an elongated opening J is formed in the lowest portions of the plates C, preferably at the meeting ends of the plates C and tie sections, as it will be understood that where the insulation means is used it will be necessary to make also the brace plates C in section of similar length to the sections of the ties and which plates C are also provided with flanges at their ends which are secured together by bolts or any other suitable fastening means.

In Fig. 5 of the drawings, I have shown an enlarged sectional view through one of the bolts which is utilized for fastening the sections of the brace plates and ties together in which a thorough insulation is afforded.

In Fig. 3 of the drawings, I have shown a slight modification in the construction of the tie sections, in which the brace plates S are bent at right angles to the position shown in Fig. 2 of the drawings, the portions of the plates S which are in contact with each other along their longitudinal centers being disposed in vertical planes instead of horizontal, as at S', and held together by means of rivets T.

In the modified forms shown in Figs. 3 and 4, the ties I are made each in one piece instead of in section, as shown in Figs. 1 and 2, and also the plates S are made each in one piece, this modified form being adapted for use where it is not necessary to insulate one rail from another. The rails L are held to the ties by any suitable fastening means, such as the clamping plates L' through which bolts L² are passed, which in turn extend through apertures formed in the ties, said clamping plates engaging the flanges of the latter and securely holding the rails in place.

By the provision of a railway tie made as shown and described, the ties being made preferably of the usual length and width of the ordinary wooden ties, the latter may
 5 be reversed in order to present the faces of the double tie for support of the rails in the event of the ties becoming worn or damaged or for any other purpose and, by reason of the intermediate plates connecting the plates,
 10 the latter are thoroughly braced and held rigidly.

What I claim to be new is:—

1. A double reversible metallic tie, comprising a plurality of I-shaped metallic irons,
 15 angled plates fastened to said irons and holding the latter spaced apart parallel to each other, means for fastening the plates together, and metallic strips parallel to each other and fastened to said plates and irons,
 20 as set forth.

2. A double reversible metallic tie, comprising a plurality of I-shaped metallic irons, angled plates fastened to said irons and extending the length thereof, said plates having
 25 portions thereof intermediate the angled irons which are in contact with each other and fastened together at their points of contact, as set forth.

3. A double reversible metallic tie, comprising a plurality of I-shaped metallic irons,
 30 angled plates fastened to said irons and extending the length thereof, said plates having portions thereof intermediate the angled irons which are in contact with each other
 35 and fastened together at their points of contact, and metallic strips connecting the ends of said plates and irons, as set forth.

4. A double reversible metallic tie, com-

prising a plurality of I-shaped metallic irons, metallic plates secured to the outer parallel
 40 faces of said irons and bent at angles at the inner marginal edges of said parallel faces and having portions which are bent horizontally, rivets passing through said horizontally disposed portions of the plates hold-
 45 ing the same together, said plates having a drain opening at the lowest portions thereof, as set forth.

5. A double reversible metallic tie, comprising a plurality of I-shaped metallic irons,
 50 metallic plates secured to the outer parallel faces of said irons and bent at angles at the inner marginal edges of said parallel faces and having portions which are bent horizontally, rivets passing through said horizontally disposed portions of the plates hold-
 55 ing the same together, said plates having a drain opening at the lowest portions thereof, and parallel metallic strips fastened to said plates and irons, as set forth. 60

6. A double reversible metallic tie, comprising a plurality of sectional I-shaped metallic irons, insulation material intermediate the meeting ends of the sections,
 65 means for fastening the latter together, sectional angle plates secured to said irons and insulation about the connecting means, said plate sections being secured together, and
 70 metallic strips fastened to the irons and plates, as set forth.

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

FRANKLIN H. KINNEY.

Witnesses:

JOSEPH ST. DENNIS.

ANNA SAUVE.