938,538.

L. WYLDER.

RAILROAD TIE.

APPLICATION FILED MAY 11, 1909.

Patented Nov. 2, 1909.

2 SHEETS—SHEET 1.

Fig. 1

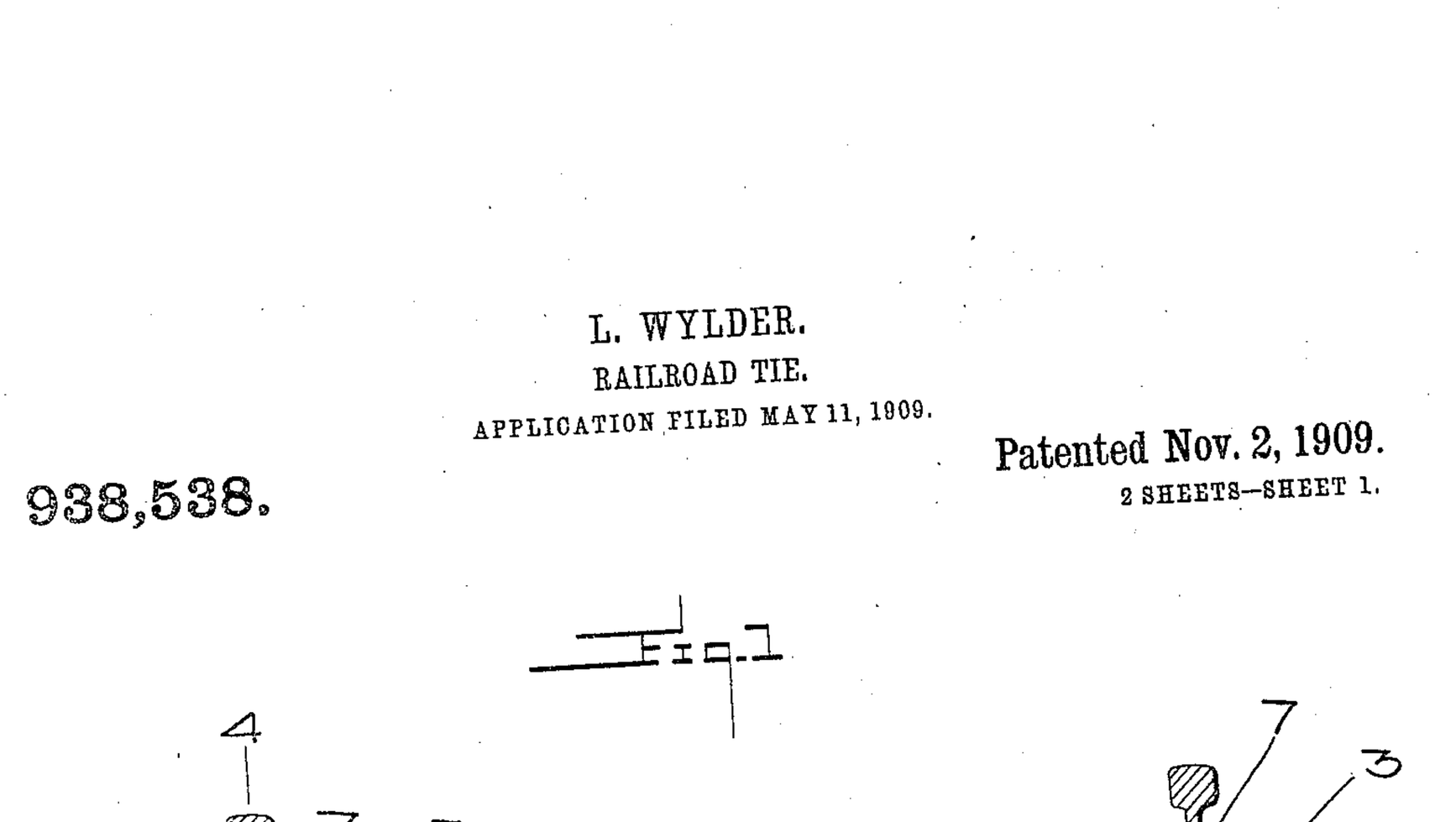


Fig. 2

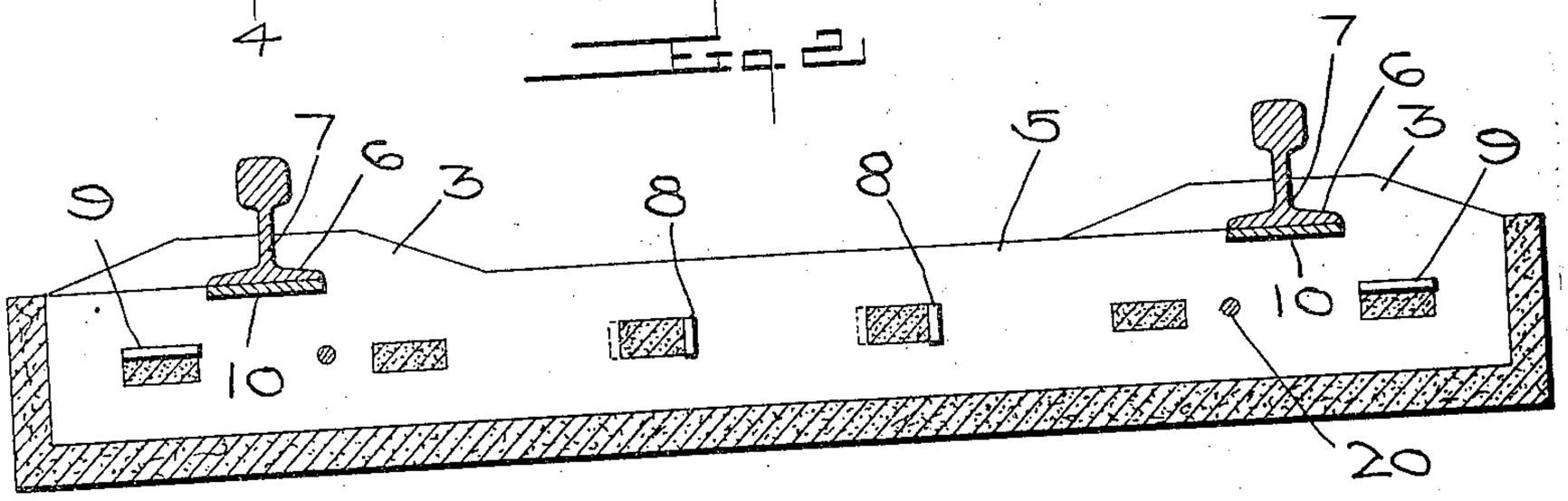
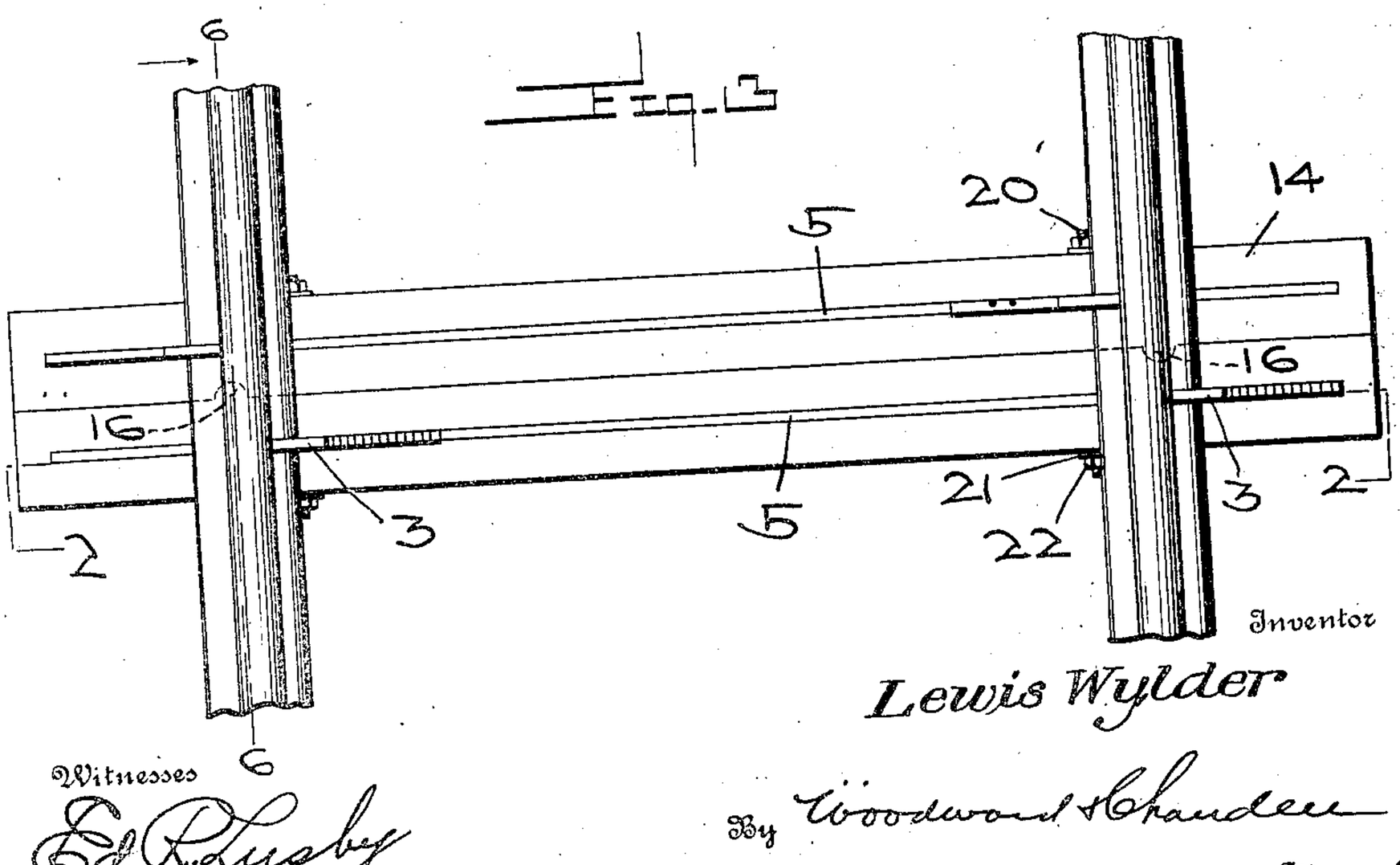


Fig. 3



Witnesses

Ed. R. Lusby

E. L. Chandlee

Inventor

Lewis Wylder

By Woodward & Chandlee

Attorneys

L. WYLDER.

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2 SHEETS—SHEET 2.

FIG. 4

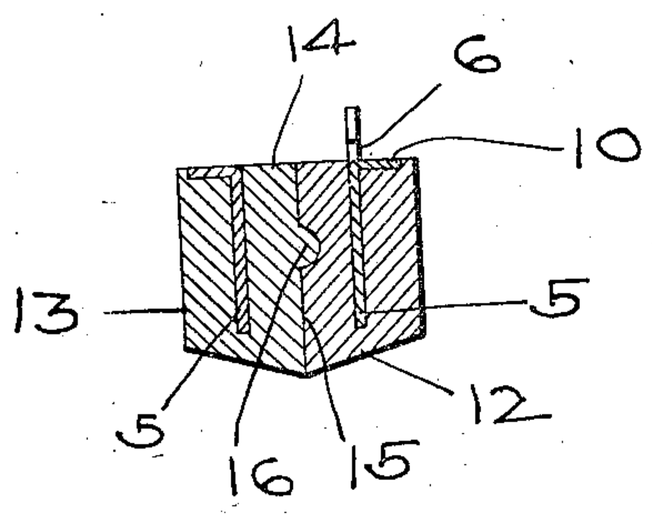


FIG. 5

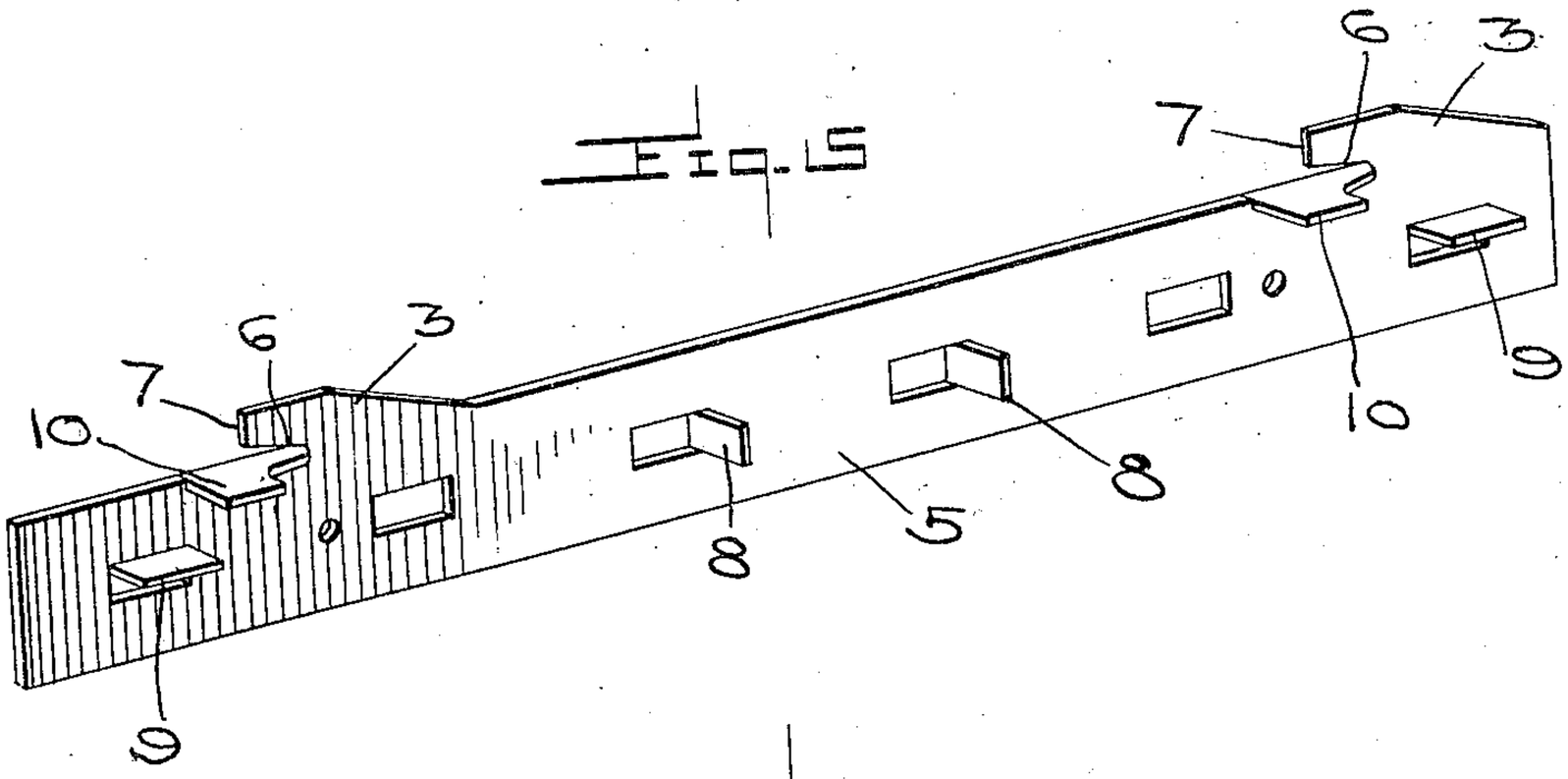
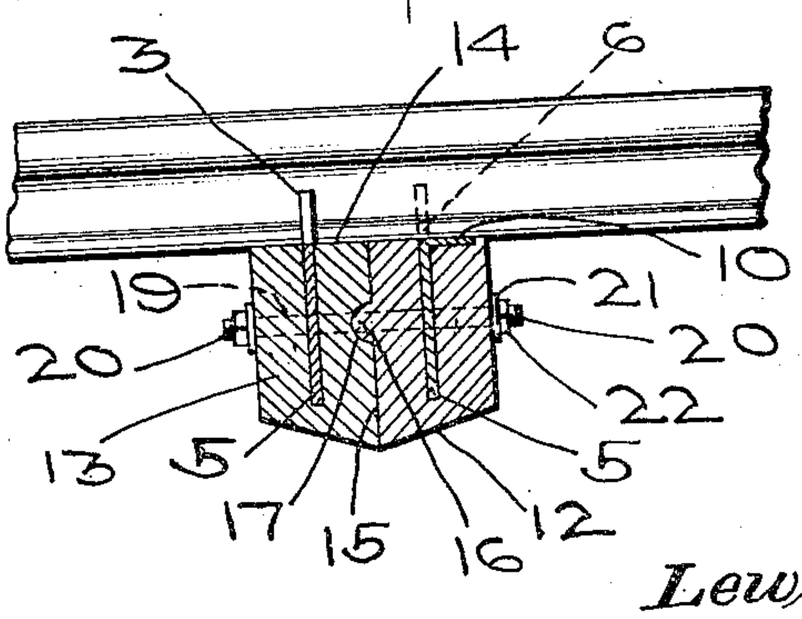


FIG. 8



Inventor

Lewis Wylder

Witnesses

Ed. Lusby

E. L. Chandler

By *Woodward & Chandler*

Attorneys

UNITED STATES PATENT OFFICE.

LEWIS WYLDER, OF CATHAY, NORTH DAKOTA.

RAILROAD-TIE.

938,538. Specification of Letters Patent. Patented Nov. 2, 1909.

Application filed May 11, 1909. Serial No. 495,220.

To all whom it may concern:

Be it known that I, LEWIS WYLDER, a citizen of the United States, residing at Cathay, in the county of Wells and State of North Dakota, have invented certain new and useful Improvements in Railroad-Ties, of which the following is a specification.

This invention relates to certain new and useful improvements in railway ties.

The object of my invention is to provide a metal reinforced concrete tie, comprising two similar members which are clamped together by means of suitable cramp rods, the ties being arranged to be secured so that they can be readily removed from below the rails or replaced.

A further object is to provide a tie so constructed that the action of a train passing over the same, has a tendency to more firmly unite the two similar tie sections in forcing them into the road bed.

A still further object is to provide a tie, so constructed that the laying of a railway will be expedited and facilitated, and in which no subsequent resetting of the rail-holding members is necessary, the rails after the ties have once been laid, always being held in proper spaced relation.

With these and other objects in view the present invention consists in the combination and arrangement of parts as will be hereinafter more fully described, and particularly pointed out in the appended claims, it being understood that changes in the specific structure shown and described may be made within the scope of the claims without departing from the spirit of the invention.

In the drawings forming a portion of this specification, and in which like numerals of reference indicate similar parts in the several views, Figure 1 is an elevational view of a tie constructed according to my invention, Fig. 2 is a sectional view on the line 2—2 of Fig. 3, Fig. 3 is a top view, Fig. 4 is a transverse sectional view on the line 4—4 of Fig. 1, Fig. 5 shows a perspective view of one of the tie plates, Fig. 6 is a transverse sectional view on the line 6—6 of Fig. 3.

In the accompanying drawings, 5 represents a metal plate approximately rectangular in outline which along one edge is provided with two similar upstanding flanges, which extend in like direction, each flange having an undercut shoulder as shown at 6 arranged to contact with the upper portion of the base flange of the rail, as clearly shown in the drawings. The vertical ends 7 of these upstanding flanges 3, are arranged to be stopped against the web of the rail as clearly shown.

Midlength each plate 5 is cut so that a plurality of rectangular webs may be stamped out of the body of the plates, the webs 8 situated intermediate of the ends of the plates extending laterally in vertical planes while the end webs 9 extend in a horizontal plane. The metal adjacent each shoulder 3 is bent at right angles for a short space, as shown in Fig. 5 to provide the rub plates 10, 10 each having two such rub plates 10 and these rub plates extend in like direction. These plates are held within suitable molds and have cast about them a cement, concrete or like tie-forming material, to provide a tie body of a suitable thickness, length and width. The openings adjacent the vertically and horizontally disposed webs permit the cement flowing through the plates, so that this plate is firmly embedded within its cement body. The flanges 3 project beyond the top of the cement body, while the rub plates 10 lie flush with the upper face of the cement body as shown. The mold is of such a shape that the concrete or cement body of each tie has an obliquely held under face as shown at 12, the tie having the short vertical face 13, the long vertical face 15 and the top 14. The vertical face 15 of the tie near one end is provided with the outstanding semispherical lug 16, while at the opposite end the face of the tie is provided with a semispherical recess 17. Each tie section near its end is provided with a transverse opening 19 as disclosed. As shown in the drawings, these plates 5 are of a length less than the length of the concrete tie body, nor are they as wide as the tie is thick, so that the plate is firmly held within the concrete body and only has one edge projecting beyond the tie body.

So far, I have described one of the half sections of my tie. The tie proper comprises two of these similar tie sections which are so connected that the lug 16 of one tie section will rest within the socket 17 of the opposite tie section. The tie sections may be embedded within the road bed and have the rails placed thereon to be finally united. To securely hold the two similar tie sections together, I employ a rod 20 which has each of its ends threaded, and these rods serve as

cramp irons in securely holding the two similar tie sections together. Suitable washers 21 and nuts 22 are used to hold the tie sections together.

My invention provides an exceedingly simple, and durable tie, which may be readily introduced below a rail and is secured thereto without the employment of any separate track or rail fastening devices. As all of the flanges are accurately cut and positioned alike, there is no possibility of the rails working out of parallel alinement. The tie sections can further be secured to the rails with ease, dispatch and accuracy.

As shown in the cross sectional view, the assembled tie presents a V-shaped face, so that the rolling stock passing over the rail has a tendency, by virtue of its weight to force these tie sections more firmly together as they sink into the roadbed.

It will be understood that if desired the clamping bolts may be dispensed with, as the peculiar construction of the tie serves to automatically hold the sections in co-engagement. This detail of construction being simply a mechanical change not involving invention, it is not deemed desirable to illustrate it further than is shown in Fig. 4.

Having thus described my said invention, what I claim as new and desire to secure by United States Letters Patent is:

1. A composite tie section, comprising a concrete body, a sheet metal plate embedded within said body, said plate having two similar upstanding top flanges arranged to overlie the base of the rail, the ends stopping against the web of the rails secured to the tie, said flanges extending in like direction, said tie having an angled underface and a socket at one end and a lug at the other upon its longest vertical face, as and for the purpose set forth.

2. A composite tie section comprising a concrete body, a sheet metal plate embedded within said body, said plate having two similar upstanding stop flanges, each with an angled under face and a vertical stop edge, said flanges extending in like direction, said tie having an angled under face, a portion of the plate adjacent to and below said stop flanges being bent at right angles and embedded within the top of said tie to form rub plates and a socket at one end and a lug at the other upon the lower vertical face of said tie, all arranged as set forth.

3. A composite tie section comprising a concrete body, a sheet metal plate embedded within said body, said plate having two similar upstanding stop flanges each with an angled under face and a vertical stop edge, said flanges extending in like direction, said tie having an angled under face, rectangular webs bent laterally outward from said plate and held alternately in horizontal and vertical positions, said tie section at one end having a lug and at the opposite end a corresponding socket.

4. A tie comprising two similar sections, each section having a sheet metal plate embedded midlength within said body, each plate having two similar upstanding stop flanges, said flanges extending in like direction, each tie section having a lug at one end and a socket at the opposite end, said lugs and sockets registering, each tie section having a transverse opening, and a cramping bolt extending through each of said transverse openings to securely cramp the tie sections together.

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

LEWIS WYLDER.

Witnesses:
C. V. BROWN,
J. C. WYLDER.