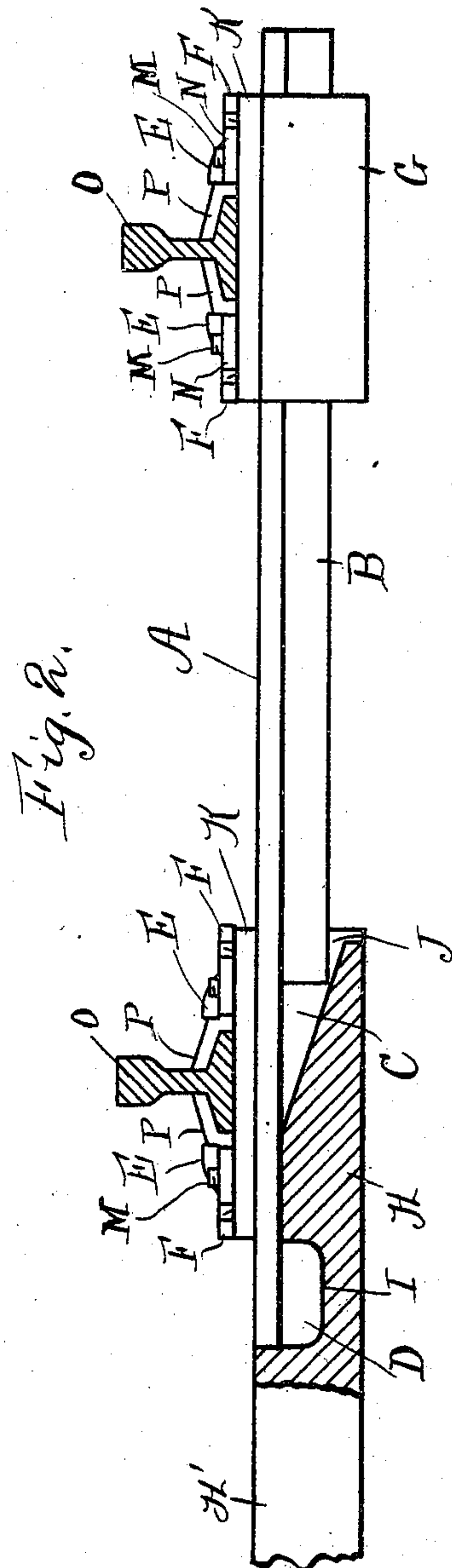
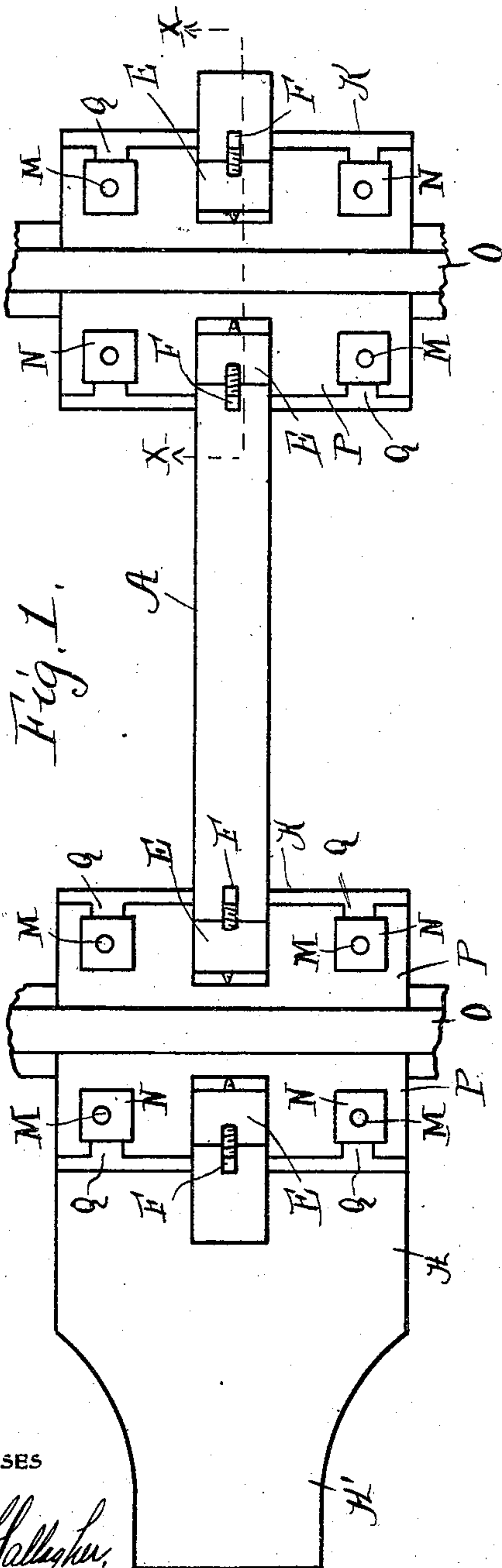


966,531.

Patented Aug. 9, 1910.

2 SHEETS—SHEET 1.



WITNESSES

S. M. Gallagher,
H. H. Burton

INVENTOR

Edwin F. Davis

BY

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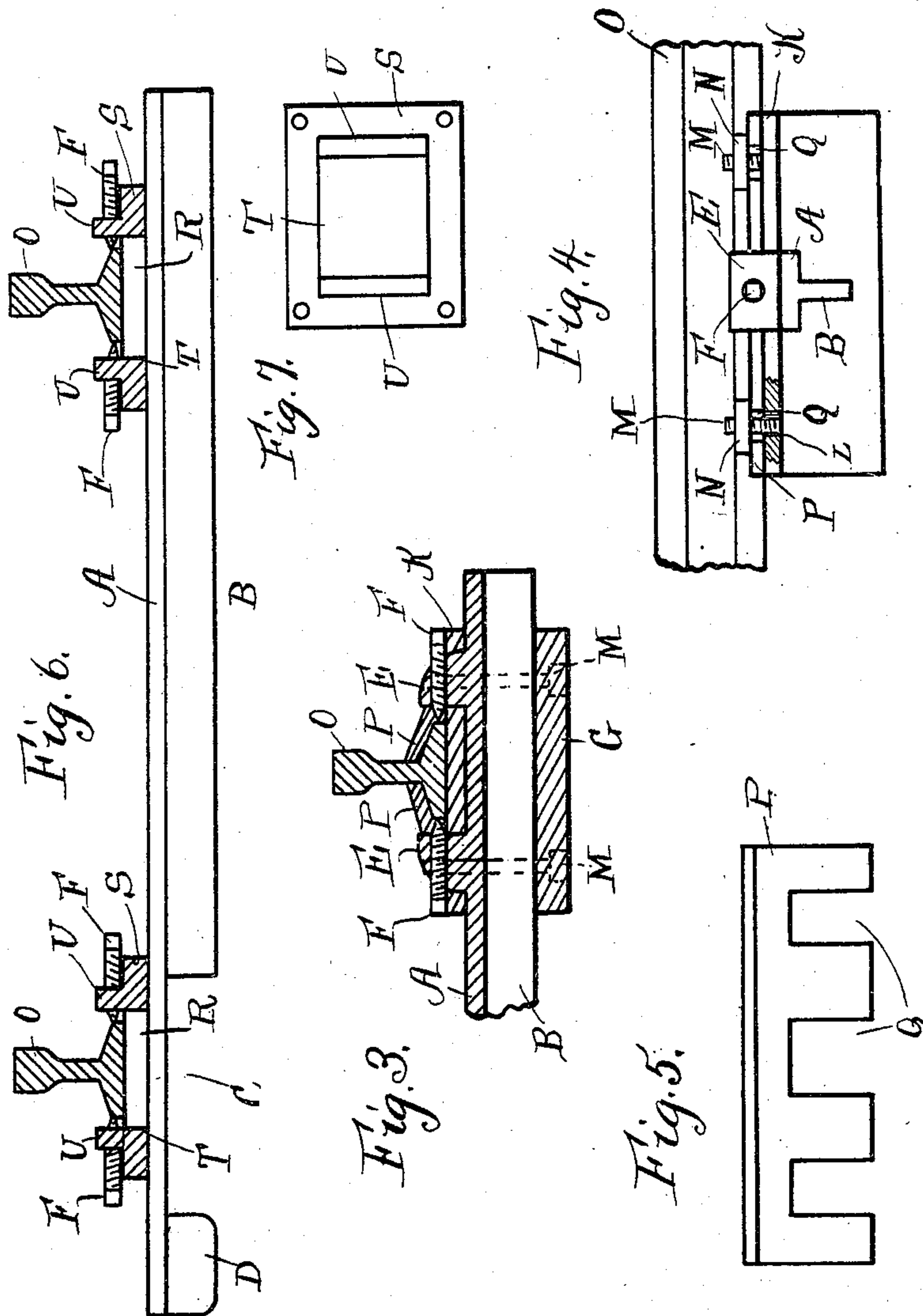
ATTORNEY

E. F. DAVIS.
RAILWAY TIE.
APPLICATION FILED MAR. 9, 1909.

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2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

EDWIN F. DAVIS, OF CORNING, NEW YORK.

RAILWAY-TIE.

966,531.

Specification of Letters Patent.

Patented Aug. 9, 1910.

Application filed March 9, 1909. Serial No. 482,288.

To all whom it may concern:

Be it known that I, EDWIN F. DAVIS, a citizen of the United States, residing at Corning, in the county of Steuben and State of New York, have invented a certain new and useful Improvement in Railway-Ties, of which the following is a specification.

My invention relates to a new and useful improvement in railway ties, and has for its object to provide an exceedingly simple and effective device of this character which may be formed of metal adapted to rest upon wooden, fiber or concrete blocks, which latter may be readily removed when occasion requires.

A further object of my invention is to provide a tie of the character described which will be cheap, easy to manufacture, and one in which the parts are interchangeable, so that when any one part wears out another may be substituted therefor without having to discard the entire tie.

A still further object of my invention is to provide a means secured to the metallic portion of the tie whereby the gage of the rails may be varied within certain limits so that should the rails spread they may be readily adjusted.

A still further object of my invention is to provide a metallic tie which will have extreme flexibility.

In the case of most of the metallic ties of the present time the great objection is their rigidity, for in most cases the rail is clamped securely to the metal portions of the tie so that as a train rounds a curve the flange of the wheels is thrust against the rail, and instead of the rail giving it is very rigid which causes the wheels to climb the rail, thus derailing the train. These are the disadvantages I have overcome by my improvement, for between the different connecting parts a sufficient play has been allowed so that the rail may give, but this play is not sufficient to allow the tracks to spread so that a train would be derailed.

With these ends in view, this invention consists in the details of construction and combination of elements hereinafter set forth and then specifically designated by the claims.

In order that those skilled in the art to which this invention appertains may understand how to make and use the same, I will describe its construction in detail, referring by letter to the accompanying drawing

forming a part of this specification, in which—

Figure 1 is a plan view of a tie made in accordance with my improvement. Fig. 2, a side elevation thereof showing one of the supporting blocks in section. Fig. 3, a section at the line X—X of Fig. 1 looking in the direction of the arrow. Fig. 4, an end view of the tie. Fig. 5, an enlarged plan view of one of the fish plates. Fig. 6, a side elevation of a slightly modified form of my invention, the securing plates being shown in section, and the supporting blocks being removed, and Fig. 7, a plan view of one of the securing plates.

In carrying out my invention as here embodied, A represents the metallic portion of the tie which is formed of sections of T-iron, a portion of the web B being cut away in proximity to both ends, as indicated at C thus producing a lug D formed from a portion of the web. With the top of the metal portion A I form the upwardly extending lugs E through which pass the adjusting screws F, the inner ends of which rest against the bottom flange of the rails, said screws being used to adjust the gage of the rail. When the right adjustment has been secured a lock nut may be placed on the screws to prevent said screws from jarring loose.

G and H represent the supporting blocks which may be made of wood, fiber or concrete, and in them are formed the openings I and J, the opening I adapted to receive the lug D, and the opening J adapted to receive a portion of the central web B. The supporting block G is formed of sufficient size to form a substantial support for one end of the metal portion A and the necessary fish plates, and the block H is formed with an extension H' adapted to receive a third rail, and when this block is made of wood, fiber or other similar material it acts as an insulator between the tracks and the third rail.

On top of the supporting blocks G and H are placed the plates K provided with suitable openings L, through which pass the bolts M on the ends of which are threaded the nuts N. When the rails O are placed in position they rest upon the plates K and resting upon the lower flanges of said rails are the fish plates P, provided with the slots Q for the reception of the bolts M and the upwardly extending lugs E. The nuts

N are then turned down upon the bolts M a sufficient distance to fasten the plates K and the fish plates P to the supporting blocks, but still there is a certain amount of play between these parts which will allow the rails to give when any sudden thrust is brought against them. When the rails are placed in position the adjusting screws F are threaded into the lugs E until the inner ends of said screws rest against the outer edge of the bottom flange of the rails which will determine the gage of said rails, and should the rails spread from any cause one of said screws may be loosened and the other threaded inward further bringing the rails into their original position. The fish plates which rest upon the bottom flange of the rail and are attached to the supporting blocks securely hold the rails in position or keep them from tipping.

By the use of my improvement the disadvantages of most ties will be overcome, for I have produced by the use of the supporting blocks a tie which will have the qualities of wood yet will be cheaper as there is a less amount of wood used. I have the advantages of a metal tie as the connecting parts are of such material and this is long lived. Another advantage is that the rails may be quickly and easily removed and others put in their place which will positively have the correct gage by the adjusting screws F and need not be tampered with while changing the rails.

In my modified form as shown in Figs. 6 and 7 I have provided a tie which will act as a switch tie for the lugs E formed with the metal portion A as in the form above described would be in the way when used in this capacity. In this said modified form I have mounted on the metal portion A an extension R on which rest the rails and over which is placed the securing plate S having a central opening T cut therein, the metal over said opening being bent upward at right angles to the body of the plate to form the extensions U through which pass the adjusting screws F for adjusting the gage of the rails as in my preferred form. It is understood that this metal part A rests in the supporting blocks and that fish plates are secured above the securing plate S thereby holding the rails in place.

Of course I do not wish to be limited to the exact details of construction here shown as these may be varied within the limits of the appended claims without departing from the spirit of my invention.

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

1. In a railway tie, a metal section formed

of T-iron having a portion of the web cut away in proximity to both ends, upwardly extending lugs formed on the top of said T-iron, adjusting screws threaded through said lugs, supporting blocks having openings formed therein in which rest portions of the web of the T-iron, an extension formed on one of said blocks, a plate having openings therein, fish plates having a plurality of slots formed therein, bolts for securing said plate and fish plates to the supporting blocks, and nuts threaded on the ends of said bolts, as specified.

2. In a railway tie, a T-iron having upwardly extending lugs formed therewith, adjusting screws threaded into said lugs, and supporting blocks adapted to receive the ends of the T-iron, as shown and described.

3. In a railway tie, a T-iron having upwardly extending lugs formed therewith, adjusting screws threaded into said lugs, supporting blocks adapted to receive the ends of the T-iron, plates, fish plates, and means for securing said plates and fish plates to the supporting blocks, substantially as shown and described.

4. In a railway tie, a T-iron having upwardly extending lugs formed therewith, adjusting screws threaded into said lugs, supporting blocks adapted to receive the ends of the T-iron, plates having suitable openings formed therein adapted to rest upon the supporting blocks, bolts for securing said plates to the supporting blocks, and nuts threaded on the ends of said bolts, as and for the purpose set forth.

5. In a railway tie, supporting blocks having grooves therein, a T-iron having upwardly extending lugs at each end and having a portion of its web cut away, said web adapted to fit in the grooves in the supporting blocks, said supporting blocks running crosswise of the T-iron and parallel with the rail so as to form an extra long support for the rails.

6. In a railway tie, supporting blocks, a T-iron having upwardly extending lugs, metallic plates the same length as the blocks having slots therein passing over the lugs, bolts for securing said plates to the blocks thereby binding the T-iron between the plates, and blocks so as to prevent the rails spreading.

In testimony whereof, I have hereunto affixed my signature in the presence of two subscribing witnesses.

EDWIN F. DAVIS.

Witnesses:

WARREN J. CHENEY,
S. E. QUACKENBUSH.