

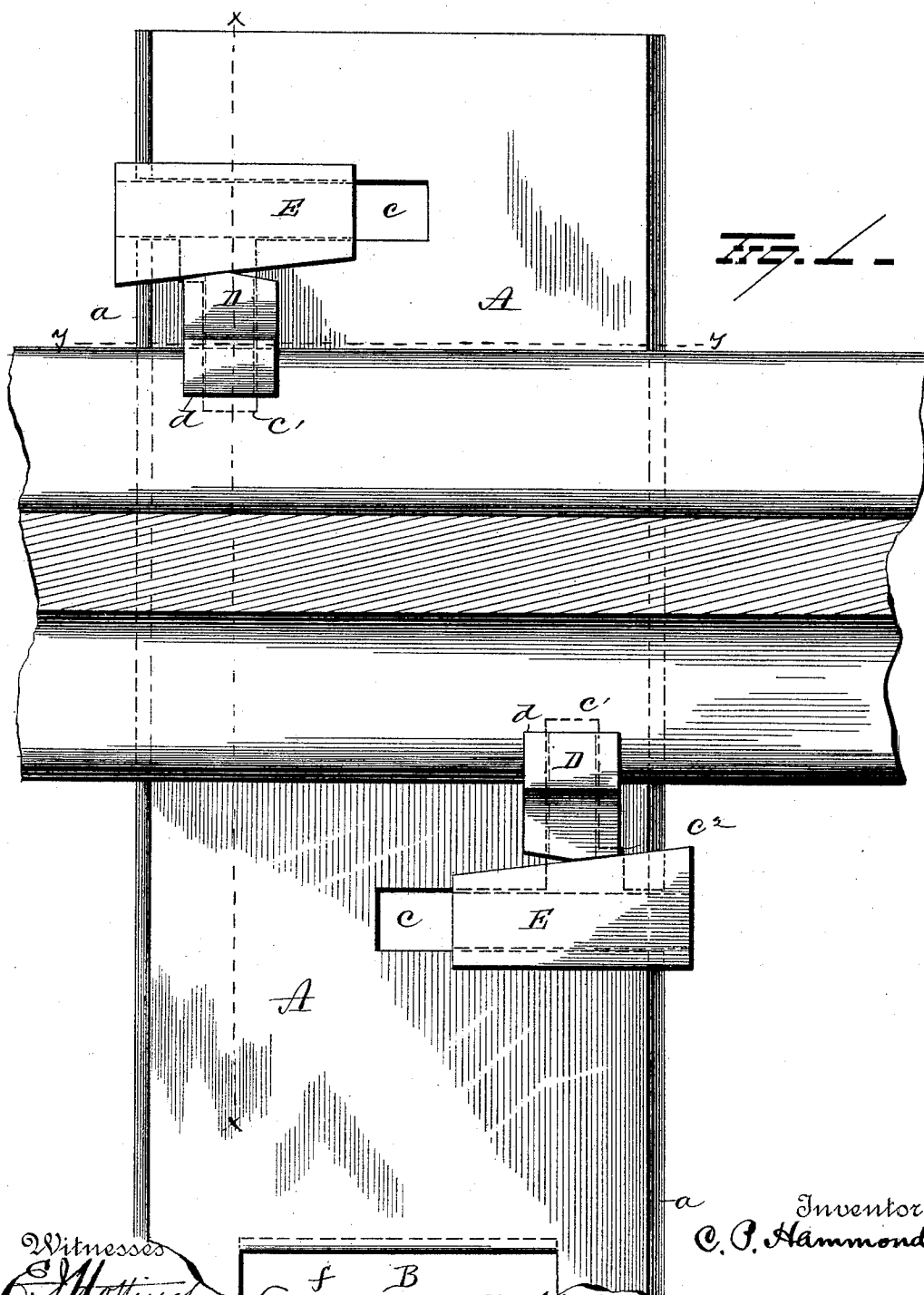
(No Model.)

2 Sheets—Sheet 1.

C. P. HAMMOND.
RAILWAY TIE AND FASTENING.

No. 463,046.

Patented Nov. 10, 1891.



Witnesses
C. J. Nottingham
G. F. Downing

By his Attorney

H. A. Seymour

Inventor
C. P. Hammond

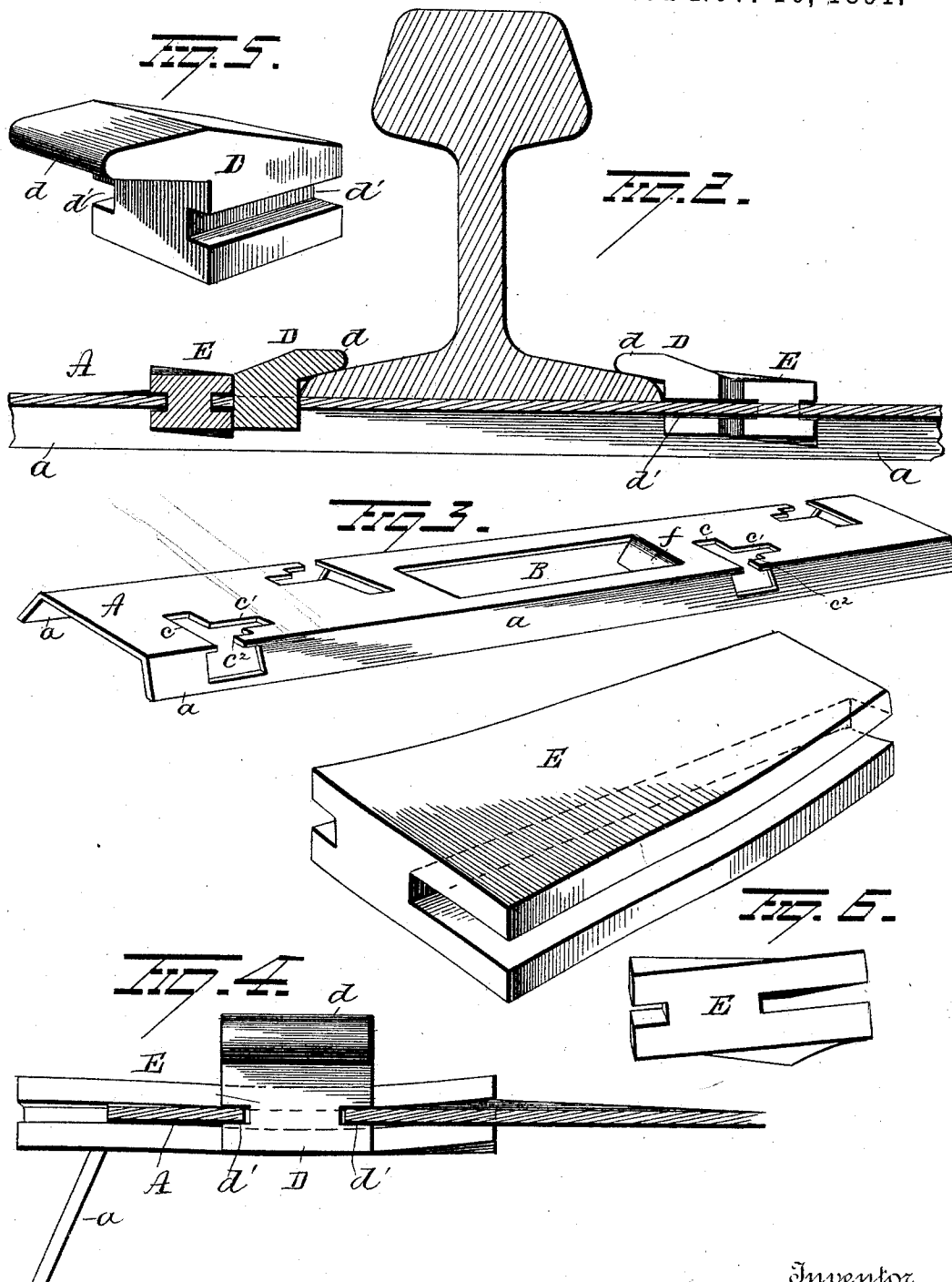
(No Model.)

2 Sheets—Sheet 2.

C. P. HAMMOND.
RAILWAY TIE AND FASTENING.

No. 463,046.

Patented Nov. 10, 1891.



Witnesses
C. P. Hammond
G. F. Downing

Inventor
C. P. Hammond
By his Attorney
H. A. Seymour

UNITED STATES PATENT OFFICE.

CHARLES P. HAMMOND, OF ATLANTA, GEORGIA.

RAILWAY-TIE AND FASTENING.

SPECIFICATION forming part of Letters Patent No. 463,046, dated November 10, 1891.

Application filed April 11, 1890. Renewed September 17, 1891. Serial No. 405,957. (No model.)

To all whom it may concern:

Be it known that I, CHARLES P. HAMMOND, of Atlanta, in the county of Fulton and State of Georgia, have invented certain new and useful Improvements in Railway-Ties and Fastenings; 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 an improvement in metal ties for railways, the object being to provide a cheap and easily-constructed metal tie and simple and secure devices for fastening rails of any and all sizes to the ties, and devices which when applied absolutely prevent any movement of the rail on the ties.

A further object is to provide securing devices which can be readily and quickly removed without injury to such devices or to the ties when it becomes necessary to take up the rails for any purpose whatever.

With these ends in view my invention consists in the parts, as will be more fully described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a plan view of a tie, showing rail-section thereon. Fig. 2 is a view in transverse section on the line xx of Fig. 1. Fig. 3 is a top view of a section of the tie, showing the openings for the clips and wedges. Fig. 4 is a view on the line yy of Fig. 1. Fig. 5 shows the clip in side and end elevation, and Fig. 6 shows the wedge in plan and end elevation.

A represents a tie, preferably made of sheet metal, and provided at its sides with depending flanges a , and preferably with an open center, as shown at B, Figs. 1 and 3. When the upper surface of the tie is continuous or closed, there is a tendency, when the road-bed is loosened or washed from under the ends of the ties, of the ties to rock lengthwise on their centers, and consequently throws considerable strain on the centers, which causes them to bulge up. By leaving the centers open this tendency to rock and bulge at the centers is entirely overcome.

The ties are each provided at points near its opposite ends with transverse slots c , which latter start from one or both side edges of the ties and extend the required distance, and the other slots c' communicate with the

transverse slots c and extend in the direction of the length of the ties. The slots c and c' have parallel sides, and consequently the wedges and clips which are secured therein are free to be moved the full length of the slots.

In the drawings I have shown the slots c c' for each rail arranged on opposite sides of the tie; but it is evident that they can be on the same side of the tie. The two series of slots c and c' at each end of the tie are separated sufficiently for the introduction between them of rails of any width. After the ties have been set and the rails placed thereon the clips D are placed in position within the slots c' . These clips D are each provided with an overhanging lip d , adapted to overlap a flange or base of the rail, and is also provided on its opposite sides with grooves d' , of a width slightly greater than the thickness of the metal from which the tie is made. The slots c' are enlarged at their outer ends, as shown at c^2 , sufficiently to permit the clips to be passed through them until the grooves d' in said clips are in line with the top surface or body of the tie. The clips are then moved toward the rail until stopped by contact therewith, and when thus placed the lips d overhang the flanges or base of the rail. These clips firmly and securely hold the rail in position, and to prevent the clips from backing away from the rail the wedges E are employed. These wedges are preferably made of steel, and are provided on their opposite side edges with parallel grooves. These wedges are introduced from the sides of the tie at right angles to the clips, the inclined side or face thereof engaging the outer ends of the clip above and below the body of the tie. As the wedges are driven, in the inclined surfaces thereof, engaging the clips, force the latter solidly into contact with the flanges of the rails and prevent any movement of the latter. To prevent the wedges from working loose, the latter are twisted slightly in the direction of their length, which throws the grooves in the sides thereof out of line, and consequently causes the wedges, when the latter are driven into place, to bind on the side walls of the slots c and prevent their accidental displacement. The rear or outer ends of the clips are beveled to corre-

spond with the inclined face of the wedge, so as to give a broad and substantial surface-contact between the parts.

By means of the tie, slotted as described, and the clips and wedges I am enabled to quickly set or remove rails, and when the rails are secured in place they are positively held against spreading or turning over. Again, it permits of the employment of any size rails, which is a great advantage, in view of the tendency to enlarge the size of the rails as traffic increases.

The slots and wedges and cleats are designed to permit the use of various size rails and yet preserve a true gage of track.

At the ends of the cut-away central sections depending flanges *f* are formed to prevent endwise displacement of the ties.

It is evident that slight changes might be resorted to in the form and arrangement of the several parts described without departing from the spirit and scope of my invention, and hence I do not wish to limit myself to the precise construction herein set forth; but

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination, with a metal tie having communicating slots located at right angles to each other, of a clip in one slot having a lip for engaging the rail-flange and a wedge

in the other slot for engaging the outer end of the clip, substantially as set forth.

2. The combination, with a metal tie having communicating slots, of a clip located in one slot and beveled at one end, and having an overhanging lip at its other end, and a wedge located within the other slot and engaging the beveled end of the clip, substantially as set forth.

3. The combination, with a metal plate having a transverse slot and a longitudinal slot, the latter opening into the transverse slot, of a clip having grooved sides and a wedge having grooved sides, the said clip and wedges being secured within said slots, substantially as set forth.

4. The combination, with a metal plate having a slot therein and a clip secured thereto against vertical displacement, of a wedge having grooved sides and twisted so as to present a warped surface on top, the said twisted wedge being driven into the slot behind the clip for preventing the latter from moving laterally, substantially as set forth.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

CHARLES P. HAMMOND.

Witnesses:

W. CLARENCE DUVALL,
GEO. F. DOWNING.