

No. 635,538.

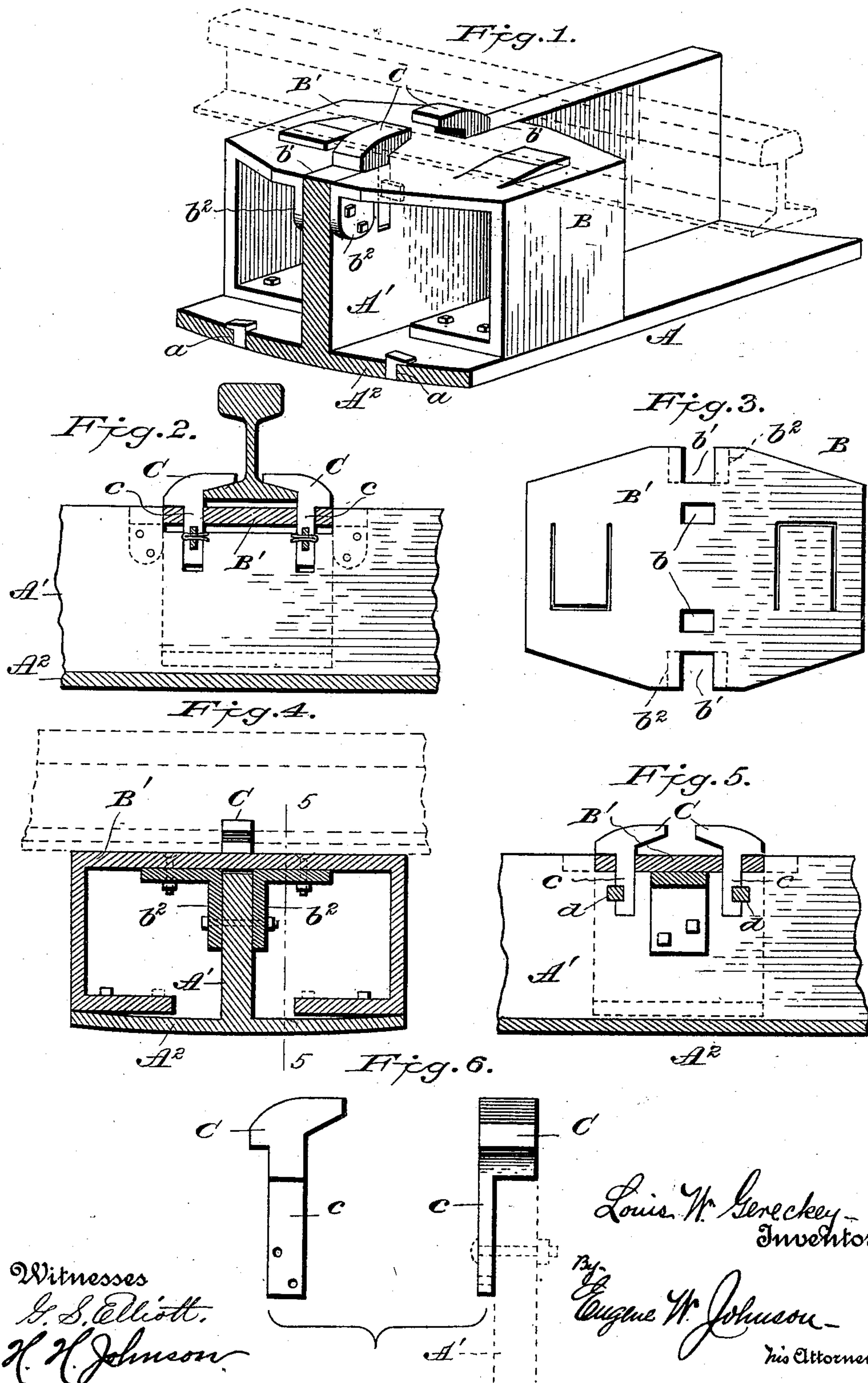
Patented Oct. 24, 1899.

L. W. GERECKEY.

METALLIC RAILROAD TIE AND RAIL FASTENER.

(Application filed Apr. 5, 1899.)

(No Model.)



UNITED STATES PATENT OFFICE.

LOUIS W. GERECKEY, OF PUEBLO, COLORADO, ASSIGNOR OF TWO-FIFTHS
TO ANDREW C. SCHAFER, OF SAME PLACE.

METALLIC RAILROAD-TIE AND RAIL-FASTENER.

SPECIFICATION forming part of Letters Patent No. 635,538, dated October 24, 1899.

Application filed April 5, 1899. Serial No. 711,767. (No model.)

To all whom it may concern:

Be it known that I, LOUIS W. GERECKEY, a citizen of the United States, residing at Pueblo, in the county of Pueblo and State of Colorado, have invented new and useful Improvements in Metallic Railroad-Ties and Rail-Fasteners, of which the following is a specification.

This invention relates to certain new and useful improvements in metallic railroad-ties and rail-fasteners; and it consists in a tie having a base-flange which is slightly convex at its base, from which base extends a web which is of greater thickness and rigidity than the base, such web being cut away to receive a rail-support, which is attached thereto and is constructed to receive rail-clamps and means for fastening said rail-clamps to the rail-support or tie, as will be hereinafter set forth, and specifically pointed out in the claims.

In the accompanying drawings, Figure 1 is a perspective view, partly in section, of a tie and rail-support constructed in accordance with my improvement. Fig. 2 is a vertical sectional view taken through the rail, its support, and through one of the base-flanges of the tie. Fig. 3 is a plan view of the rail-support. Fig. 4 is a vertical sectional view taken longitudinally through the rail-support and transversely through the tie, showing a modified construction of the rail-support. Fig. 5 is a vertical section on the dotted line of Fig. 4, and Fig. 6 is a view showing the construction of the rail-clamps.

Referring to the drawings, A indicates a metallic tie having a vertical web or flange A' and a base-flange A², which is curved in cross-section, the edges being considerably higher than the central portion, so that the base-flange will be at its under edge convex in cross-section. The base-flanges are of less thickness than the vertical web and may have therethrough apertures *a a* for the passage therethrough of spikes or bolts used for attaching the tie to a bridge or other structure.

The rail-supporting plates B are constructed to provide a top or horizontal portion B', which may be constructed so as to have integral therewith spring portions of the type shown in my patent dated January 31, 1899, No. 618,566, upon which the rail will bear when

attached to the supporting-plate. The rail-support B is provided with apertures *b b*, for the passage through which are passed rail-clamps C, and the edges of the top plate are cut away, so that the vertical flange of the tie may extend through the recesses *b'*. To the under side of the rail-support are depending ears or lugs *b²*, having apertures for the passage of bolts for connecting the depending lugs to the flange A' of the tie. These parts *b²* may be formed integral with the top plate of the rail-support and positioned at the sides thereof, or they may be made of separate angle-pieces, as shown in Fig. 4, and when so constructed are bolted to the rail-support and to the vertical flange of the tie. The ends of the rail-support B depend vertically from the top part thereof, and their ends extend inward at right angles and are connected to the base-flange of the tie.

The vertical flange A' of the tie has its upper edge cut away, so that the top plate of the tie-support will pass into said recess or cut-away portion and will be normally flush with the upper edge of the flange A', the recess being somewhat deeper than the thickness of the top plate. The flange A' is also cut away to provide for the reception of the lower ends of the rail-clamps C, and these rail-clamps are constructed so as to overlie the base-flanges of the rail and bear upon the top plate of the rail-support, the shanks *c* of said rail-clamp passing through the apertures *b* and into the recesses in the vertical portion A' of the tie. Through the apertures in the shanks of the rail-clamps are passed pins for holding them against withdrawal.

In Figs. 4 and 5 of the drawings modified forms of the structure are shown, and, as shown in Fig. 5, the vertical flange A' of the tie may have the vertical recesses cut away on one side, the shanks of the rail-clamps being similarly cut away, so that a fastening-pin *d* may pass through the openings so formed and hold the shanks of the rail-clamp in engagement with the vertical portion A' of the tie, said rail-clamps also assisting in holding the top plate in engagement with the flange of the tie.

In Fig. 6 I have shown a rail-clamp which is adapted to be used with a rail-support hav-

ing apertures through its top plate to one side of the vertical flange of the tie, and when such rail-clamps are used they are bolted or otherwise connected to the side of the vertical flange of the tie.

In the construction shown in the drawings the heads of the rail-clamps overlie the strip or narrow portion of metal between the apertures *b* and the recesses *b'* and serve to reinforce that part of the top plate, which top plate lies substantially flush with the upper edge of the flange and embraces said flange adjacent to the recess therein.

I claim—

1. The combination with the rail, of a tie having a vertical flange and a rail-clamp provided with a head which engages with the flange of the rail, a shoulder which engages the upper edge of the tie and a depending portion below the shoulder which overlies one side of the tie; together with means for connecting said depending portion of the rail-clamp with the tie, for the purpose set forth.

2. In a metallic railroad-tie and rail-support, the combination with a metallic tie having a central web which is cut away or recessed at its upper portion, base-flanges which extend from the vertical flange, of a rail-support cut away to provide side recesses, apertures adjacent to said side recesses said rail-support also having downwardly-extending side pieces with inturned portions for engagement with the base-flanges of the tie, the top plate of the rail-support having on its under side lugs which depend therefrom and embrace the vertical flange of the tie; together

with rail-clamps which pass through the rail-support, substantially as shown and for the purpose set forth.

3. The combination with a metallic tie and rail-supporting plate connected together and constructed substantially as shown, of the rail-supporting plates having apertures there-through and side recesses which are on a line with each other, the upper edge of the vertical web of the tie being cut away to provide a recess within which a portion of the top plate of the rail-support will lie and recesses for the reception of shanks of rail-clamps; together with rail-clamps having the shanks and heads constructed so as to overlie the top plate of the rail-support and the flanges of the rails, for the purpose set forth.

4. In combination with a metallic railway-tie having a vertical flange recessed and provided with vertical recesses which extend from the recess hereinbefore mentioned, said recesses having laterally-cut-away portions, a rail-support adapted to be connected to the tie; together with rail-clamps the shanks thereof having notches and a pin adapted to enter said notches and the laterally-cut-away portion of the tie, substantially as shown and for the purpose set forth.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

LOUIS W. GERECKEY.

Witnesses:

D. R. GREENE,
S. W. TOWNSEND.