(No Model.)

C. S. WESTBROOK.

RAILROAD TIE.

No. 302,967. Patented Aug. 5, 1884.

Fig. 1.

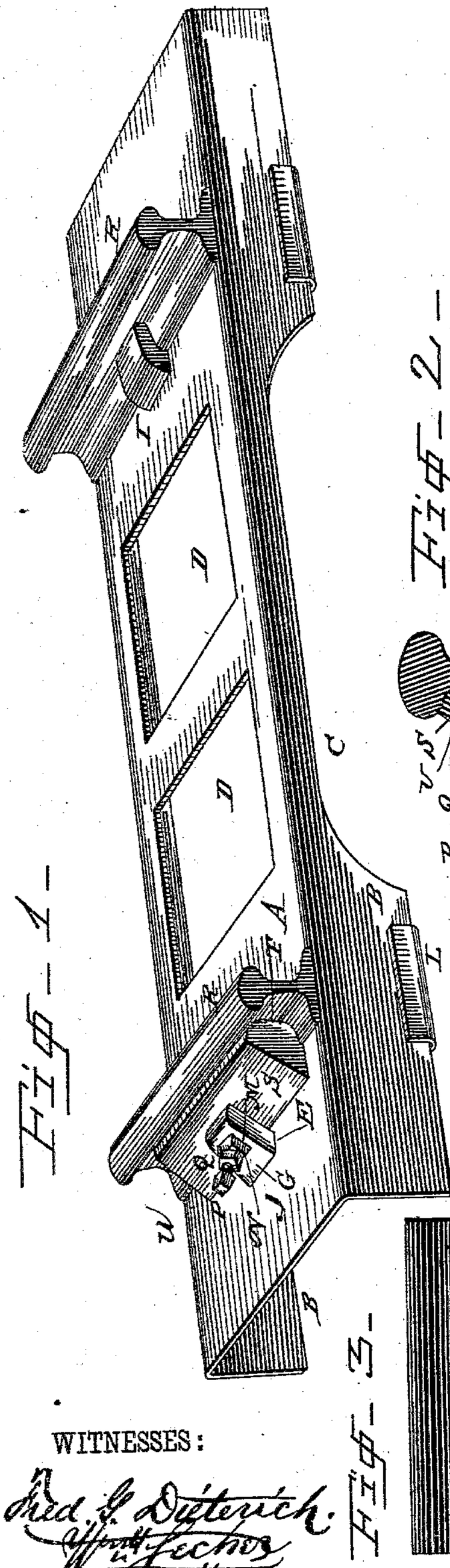

Fig. 2.

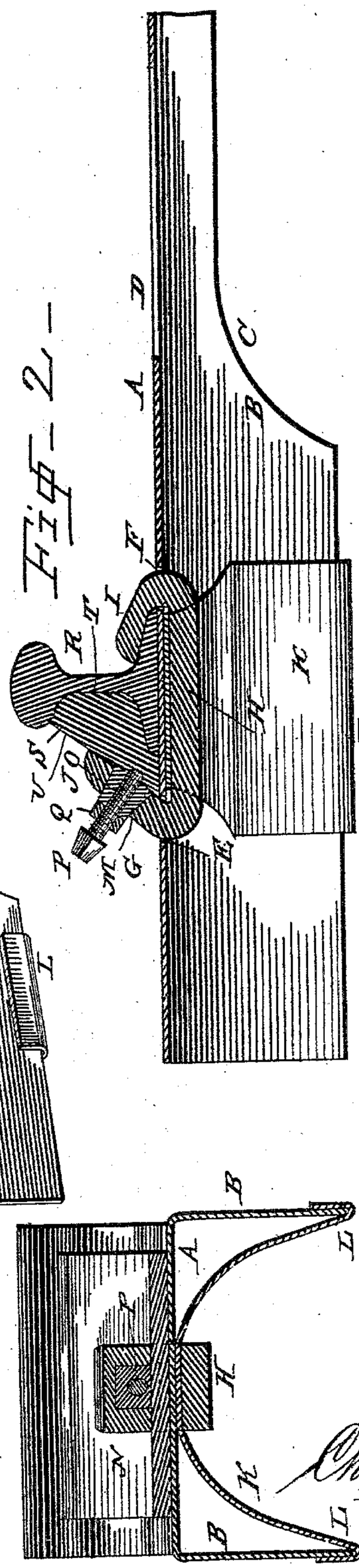

Fig. 3.

Fig. 4.

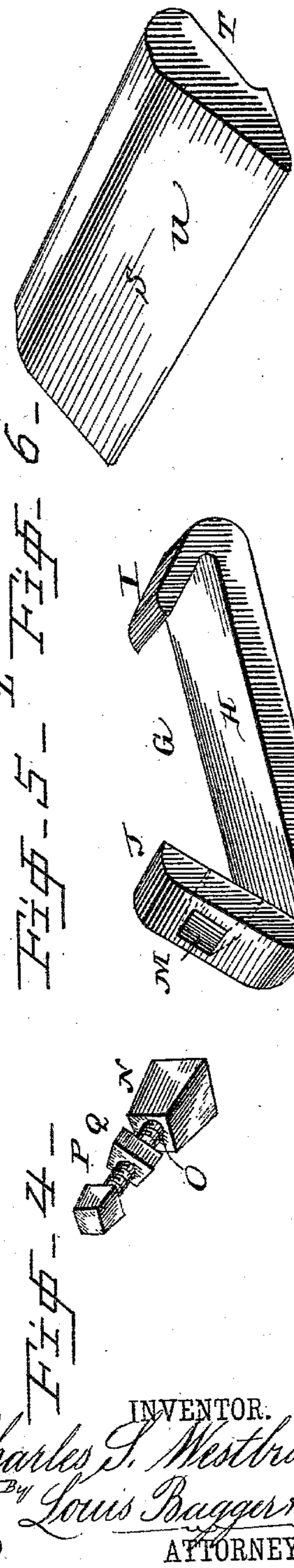

Fig. 5.

Fig. 6.

Fig. 7.

WITNESSES:

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RAILROAD-TIE.

SPECIFICATION forming part of Letters Patent No. 302,967, dated August 5, 1884.

Application filed December 10, 1883. (No model.)

To all whom it may concern:

Be it known that I, CHARLES S. WESTBROOK, a citizen of the United States, and a resident of Spragueville, in the county of St. Lawrence and State of New York, have invented certain new and useful Improvements in Railroad-Ties; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a perspective view of my improved railroad-tie and a portion of the track. Fig. 2 is a longitudinal vertical section of the same. Fig. 3 is a cross-section with the rail removed, and Figs. 4, 5, and 6 are detail views of the parts of the chair.

Similar letters of reference indicate corresponding parts in all the figures.

My invention has relation to metallic railroad ties and chairs; and it consists in the improved construction and combination of parts of the same, as hereinafter more fully described and claimed.

In the accompanying drawings, the letter A indicates the tie, which is made of sheet metal, bent to form two longitudinal downwardly-bent flanges, B, at its sides, which flanges are cut out at their central portion for the largest part of their width, as shown at C, reducing their weight without reducing their strength, and the central portion of the top or upper side of the tie is cut out to form two, or more or less, apertures, D, through which the ballast may be tamped under the tie. Near the ends of the tie it is provided with two pairs of transverse slots, E and F, through which slots the ends of the chairs G project, by which the rails are held fast, and the said chairs consist of a central straight portion, H, extending from one slot to the other upon the under side of the tie, an upwardly and inwardly bent lip, I, at the inner end, and an inwardly-inclined lip, J, at the outer end. A brace-strip, K, of sheet metal, having its central portion reduced or narrowed, and having its ends L bent upward, is passed with its reduced central portion between the central portion of the chair and the under side of the tie, and the upwardly-bent ends clamp the edges of the downwardly-bent flanges of the tie, keeping the flanges from spreading by the weight brought to bear upon them by the cars passing over them. The inclined lip of the chair has a truncated pyramidal perforation, M, into which a truncated pyramidal block, N, having a female threaded perforation, O, fits, and a set-screw, P, having a locking-nut, Q, turns in this perforation.

R is the rail, which is placed upon the top of the tie, with the upwardly and inwardly bent lip clamping the inner flange of its foot, and a key, S, having its inner face, T, corresponding in shape to the shape of the outer side of the rail, and having its outer side, U, of an incline corresponding to the incline of the inclined lip, fits between the outer side of the rail and the inner side of the inclined lip, and is secured by the screw passing through the block and bearing against its outer side, the said key holding the rail firmly in place. It will be seen that the rail may thus be firmly clamped upon the tie, and that if by accident the fastening-screw should be broken the pyramidal block may be removed from the perforation in the chair and another put in its place with a new screw, obviating the necessity of drilling the broken screw out and making new threads in the perforation and of providing a larger screw. It will also be seen that the tie is less weakened by the transverse slots, through which the lips of the chair pass, than by securing the chair upon the tie, or by securing clamping-lips upon the tie, which are liable to be torn off, and thus damage the tie, so as to make it useless.

Having thus described my invention, I claim and desire to secure by Letters Patent of the United States—

1. The combination of a metallic railroad-tie having downwardly-bent flanges upon its sides, and having slots at its ends, a chair having its rail-clamping ends projecting through the said slots, and having its central portion bearing against its under side, and a bracing-strip passing between the under side of the tie and the central portion of the chair, and having its ends bent upward, clamping the edges of the downwardly-bent flanges of the tie, as and for the purpose shown and set forth.

2. The combination of a chair having an upwardly and inwardly bent clamping-lip at one edge, and an inwardly-inclined lip at the other end, provided with a truncated pyramidal perforation, a truncated pyramidal block having a female threaded perforation, a set-screw, a rail clamped at one flange of its foot by the upwardly and inwardly bent clamping-lip, and a key fitting between the side of the rail and the inwardly-inclined lip secured by the set-screw, as and for the purpose shown and set forth.

3. The combination of a metallic railroad-tie having downwardly-bent flanges at its sides, the central portion of which flanges is cut out for a portion of their width, and having two transverse slots at each end, a chair having an upwardly and inwardly bent clamping-lip at one end, and an inwardly-inclined lip at its other end, having a truncated pyramidal perforation, both lips projecting through the slots in the tie, a truncated pyramidal block having a female threaded perforation, a set-screw having a locking-nut, a brace-strip narrowed at its center, and having upwardly-bent clamping ends, a railroad-rail, and a key fitting between the outer side of the rail and the inner side of the inclined lip, all constructed as and for the purpose shown and set forth.

In testimony that I claim the foregoing as my own I have hereunto affixed my signature in presence of two witnesses.

CHARLES S. WESTBROOK.

Witnesses:

F. A. DAVIS,

WILLIAM A. EGERT.