

J. F. WITT.
COMBINATION RAIL PLATE AND BRACE.
APPLICATION FILED SEPT. 25, 1908.

915,921.

Patented Mar. 23, 1909.
2 SHEETS—SHEET 1.

Fig. 1.

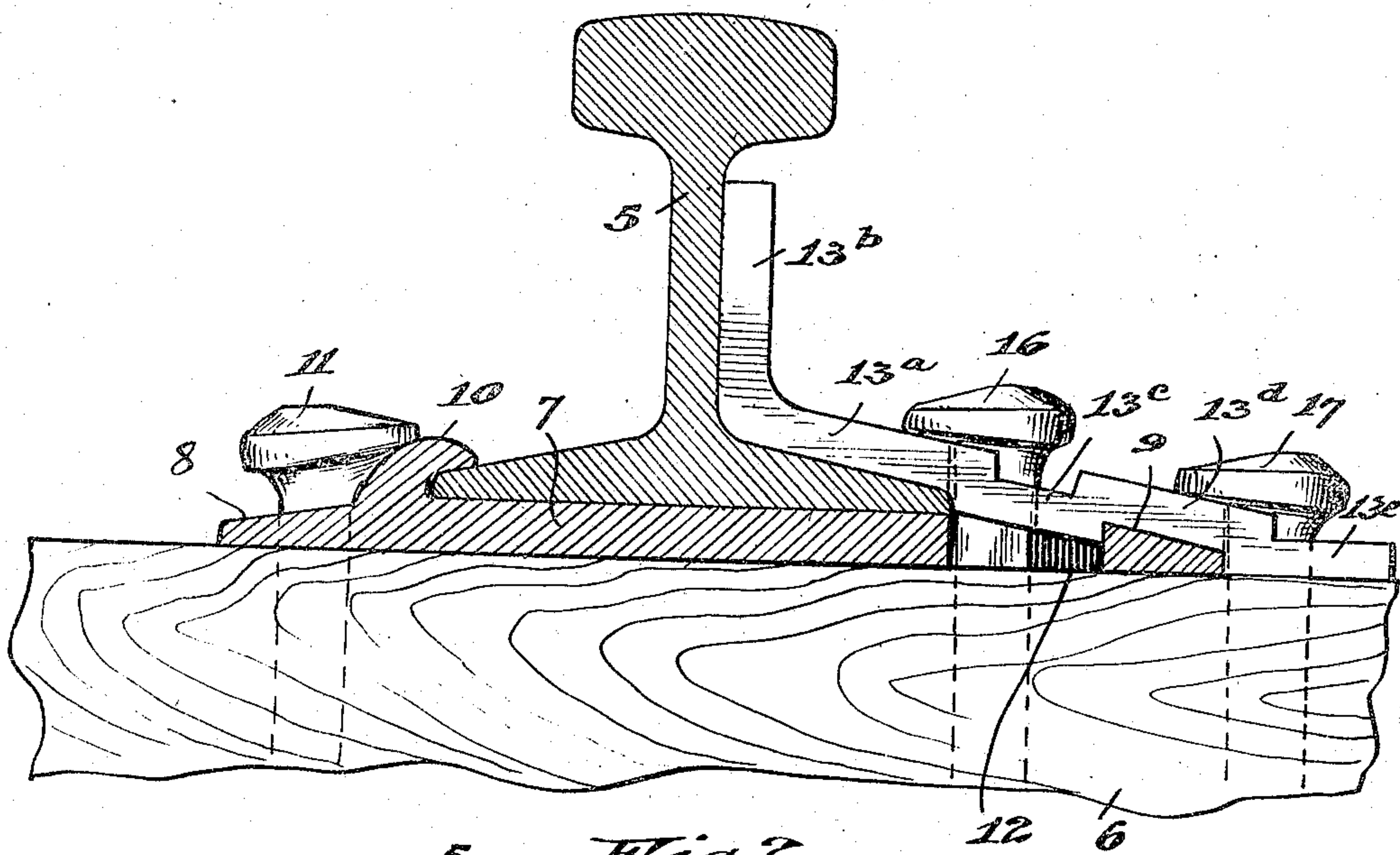
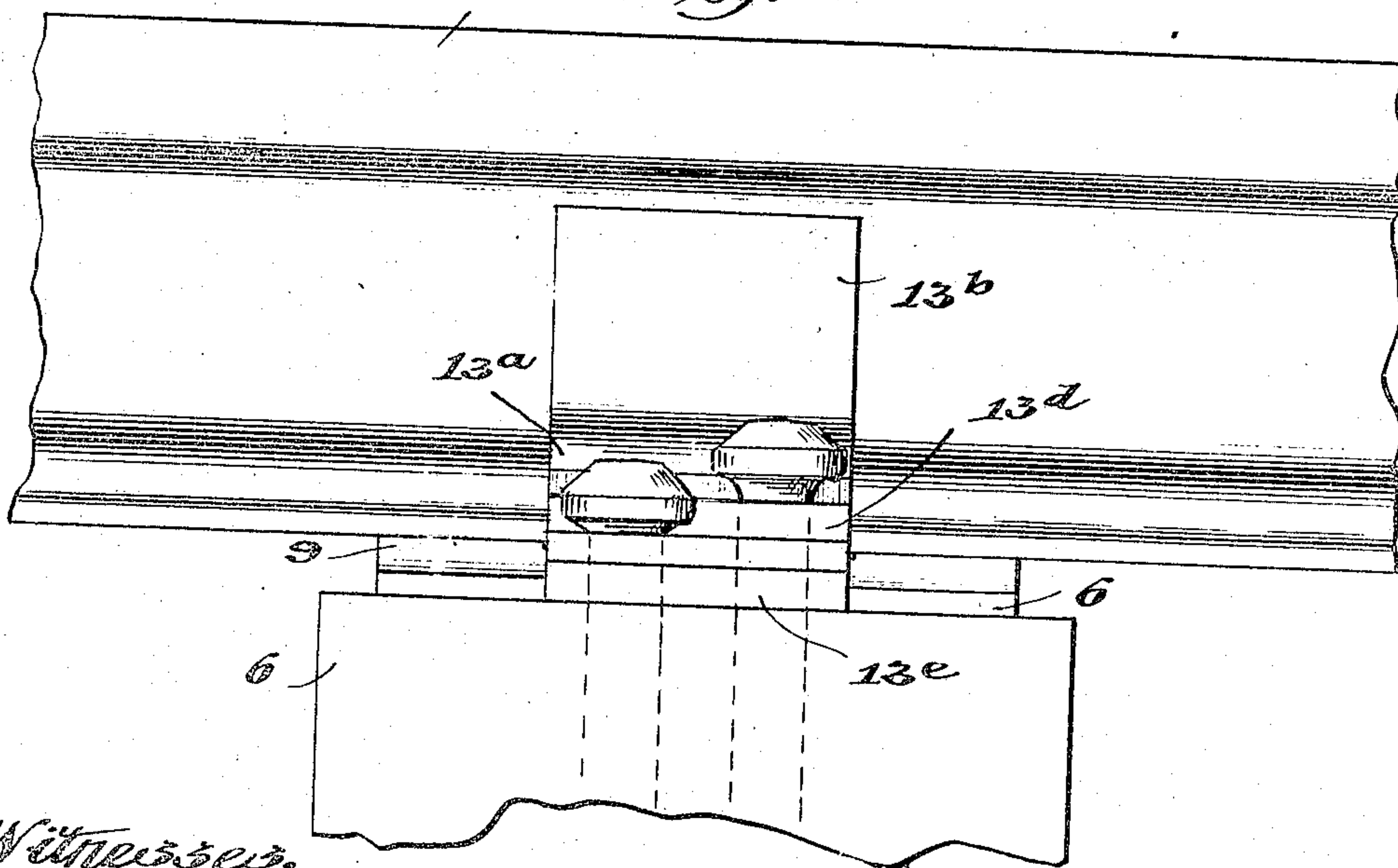


Fig. 2.



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Fig. 3.

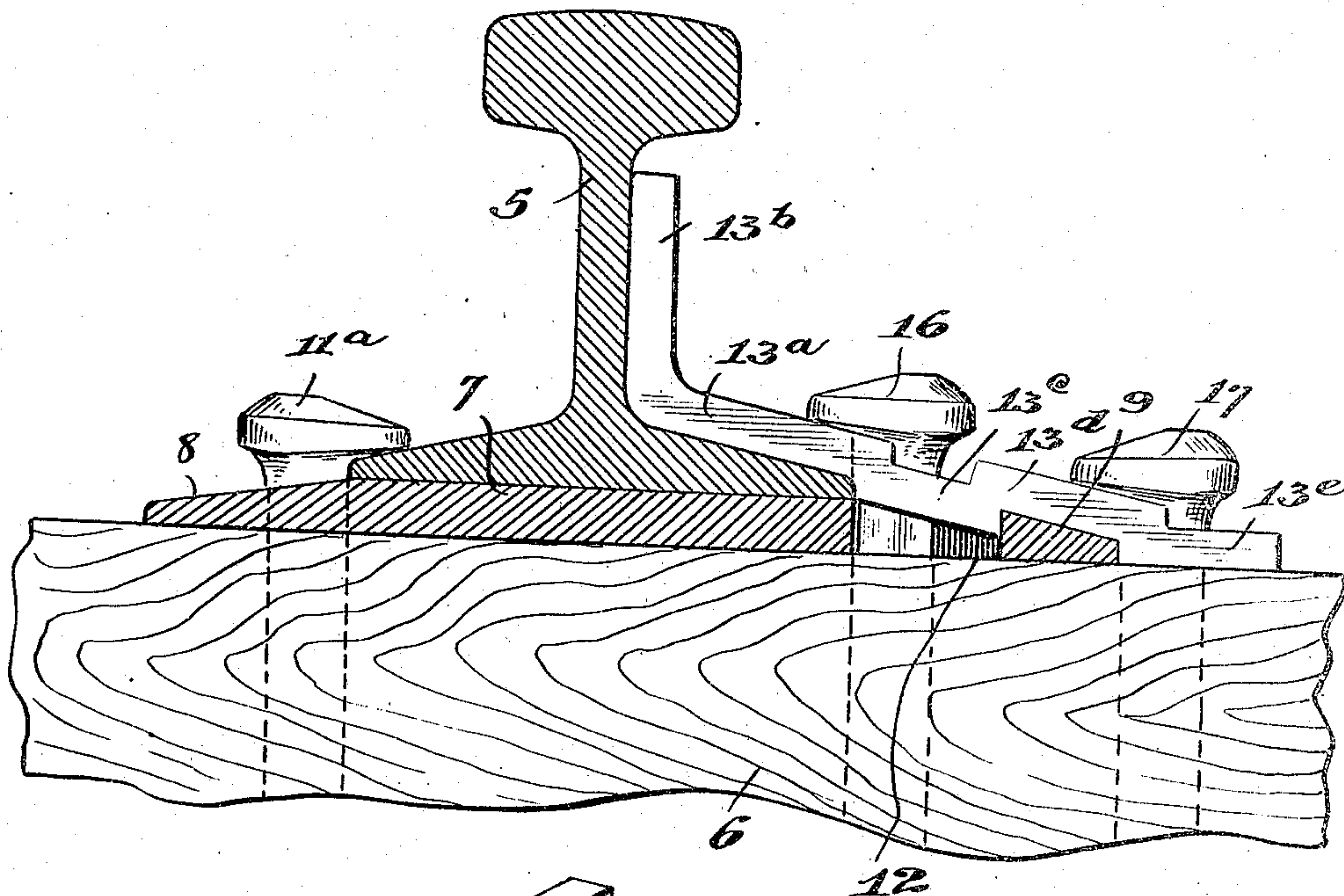
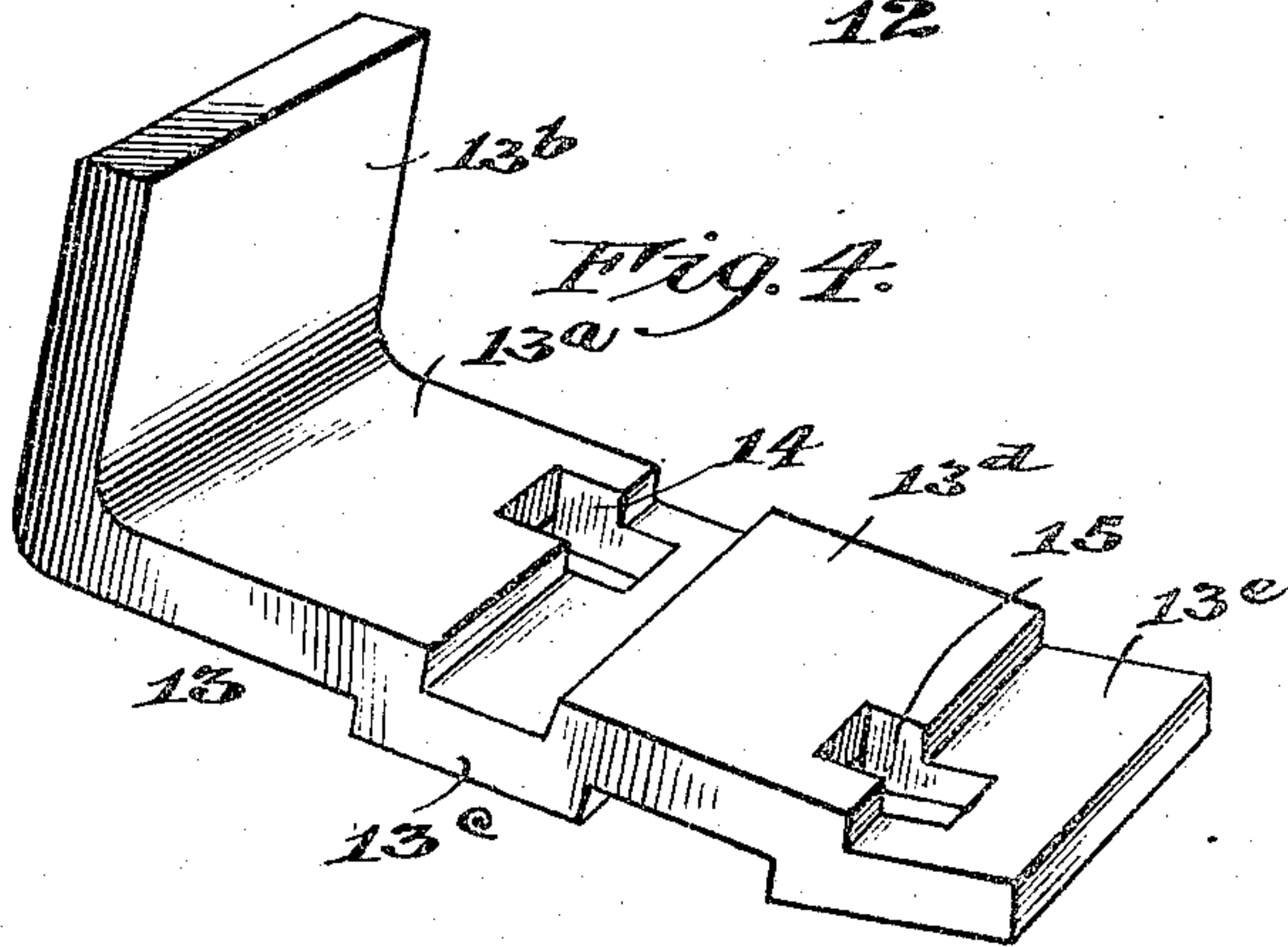


Fig. 4.



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UNITED STATES PATENT OFFICE.

JULIUS F. WITT, OF CHICAGO, ILLINOIS.

COMBINATION RAIL PLATE AND BRACE.

No. 915,921.

Specification of Letters Patent.

Patented March 23, 1909.

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To all whom it may concern:

Be it known that I, JULIUS F. WITT, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in a Combination Rail Plate and Brace, of which the following is a specification.

This invention relates to the art of railway track appliances, and has reference more particularly to a device in the nature of a combination rail plate and brace for effectively securing the rail of an ordinary railway track against spreading or overturning.

The general object of the invention is to provide a device of the character mentioned characterized by a high degree of efficiency, simplicity, economy, and ease of application.

Integral or one-piece combination rail plates and braces have heretofore been proposed, but they are difficult and expensive of construction, and frequently capable of application only by being introduced from the end of the rail.

My invention aims to provide a device which will possess all the desirable characteristics of an integral plate and brace, with none of the objections and drawbacks incident thereto.

My invention will be readily understood when considered in connection with the accompanying drawings illustrating practical embodiments thereof, in which,—

Figure 1 is a cross-sectional view through a rail equipped with the device of my invention in its most complete and approved form. Fig. 2 is a side elevation of the same, viewed from the side on which the brace is applied. Fig. 3 is a view similar to Fig. 1 in which the integral clamp or jaw on one side of the plate is omitted. Fig. 4 is a perspective elevation of the rail brace.

Referring first to Figs. 1 and 2, 5 designates a rail of standard form, and 6 an ordinary wooden tie on which the same rests. 7 designates as an entirety my improved rail plate, which consists of a flat rectangular metal plate of a width somewhat exceeding that of the rail base, the opposite edges of said plate being preferably beveled or tapered, as shown at 8 and 9. The plate 7 is provided on its upper surface just inwardly of the tapered edge 8 with an integral inwardly extending jaw 10 which is adapted to clamp the adjacent edge of the rail base and securely hold the latter to the upper portion

of the plate. The tapered edge 8 is provided just outside the jaw 10 with one or more apertures for the reception of a spike or spikes 11 of the usual form, which are driven down hard against the upper face of the jaw 10, this construction not only securing the plate to the tie on this edge, but also reinforcing the jaw 10 against danger of breaking under strain. The plate 7, on the opposite side of the rail, is provided with a rectangular aperture 12 lying just beyond the edge of the rail base, which aperture coöperates with a brace designated as an entirety by 13. This brace, which is preferably and most cheaply pressed or stamped from a single flat strip of malleable metal, comprises an inclined portion 13^a which overlies the rail base, a substantially vertical portion 13^b which lies against the web of the rail, a depressed or downwardly offset portion 13^c which seats into and snugly fits the aperture 12, having a square abutment at its outer edge against the outer edge of said aperture, an inclined portion 13^d in the plane of the portion 13^a and overlying the beveled margin 9 of the plate 7, and a downwardly offset horizontal portion 13^e which rests upon the tie 6 and abuts at its inner edge against the edge of the plate 7. Downwardly offset parts 13^c and 13^e are suitably apertured, as shown at 14 and 15 (Fig. 4) for the passage therethrough of ordinary spikes 16 and 17, respectively, by which the brace is strongly secured in place and interlocked with the plate 7.

In the application of the device, by slightly lifting the rail from the tie, the plate 7 can be inserted from the left, as shown in Fig. 1, the jaw 10 being driven into snug engagement with the edge of the rail base on that side. The brace 13 is then applied, the downwardly offset part 13^c being carefully fitted to the aperture 12 of the plate, and the securing spikes are then driven, fastening the entire device strongly to the tie. The rail is thus secured on both edges of its base against rising from the tie, while the brace 13 strongly reinforces the rail against overturning. Obviously, lateral thrust in either direction upon the rail is resisted by the spikes on both sides, the strain being transmitted through the plate 7.

The modified form shown in Fig. 3 is the same as that described in respect to the brace, the plate differing simply in the omission of the jaw 10, the corresponding edge of the plate in this case being simply

apertured for a sufficient number of spikes 11^a directly engaging the adjacent edge of the rail base to securely hold the latter in place.

5 I claim:

1. The combination rail plate and brace, comprising a plate adapted to underlie a rail base and having an apertured marginal portion extending beyond the edge of the latter, and a brace narrower than said plate 10 and having a portion engaging the web of the rail and an inclined portion overlying and in contact with the rail base and the upper surface of the marginal portion of said plate said brace being provided with an intermediate downwardly offset integral projection extending across the full width thereof and engaging the aperture of said marginal portion of the plate, substantially as described. 15 20

2. A combination rail plate and brace, comprising a plate adapted to underlie a rail base and having an apertured marginal portion extending beyond the edge of the latter, 25 and a brace comprising a flat strip of malleable metal narrower than said plate and bent to present an upwardly turned substantially vertical end portion lying against the web of the rail, and an inclined portion overlying 30 and in contact with the rail base and the upper surface of the marginal portion of said plate, said inclined portion having an intermediate downwardly bent projection extending across the full width thereof and engaging the aperture of said marginal portion of the plate, substantially as described. 35

3. A combination rail plate and brace, comprising a plate adapted to underlie a rail base and having an apertured marginal portion extending beyond the edge of the latter 40 the upper surface whereof is inclined so as to

lie substantially in the plane of the upper surface of the rail base, and a brace narrower than said plate and having a portion engaging the web of the rail and an inclined portion overlying and in contact with the upper 45 inclined surfaces of said rail base and marginal portion of said plate, said brace being provided with an intermediate downwardly offset integral projection extending across 50 the full width thereof and engaging the aperture of said marginal portion of the plate, substantially as described.

4. A combination rail plate and brace, comprising a plate adapted to underlie a rail 55 base and having an apertured marginal portion extending beyond the edge of the latter, and a brace adapted to overlie the rail base and said marginal portion of the plate, said brace having an intermediate depending projection engaging the aperture of said plate 60 and a terminal depending projection engaging the outer edge of said marginal portion of the plate, substantially as described.

5. A combination rail plate and brace, 65 comprising a plate adapted to underlie a rail base and having an apertured marginal portion extending beyond the edge of the latter, and a brace adapted to overlie the rail base and said marginal portion of the plate, said 70 brace comprising a flat strip of malleable metal bent to present an upwardly turned end portion abutting against the web of the rail, a transverse downwardly offset projection engaging the aperture of said plate, and 75 a transverse terminal offset projection engaging the outer edge of said marginal portion of the plate, substantially as described.

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