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G. W. WHITEMAN.

RAIL BRACE AND FASTENING MEANS THEREFOR.

APPLICATION FILED MAR. 21, 1907.

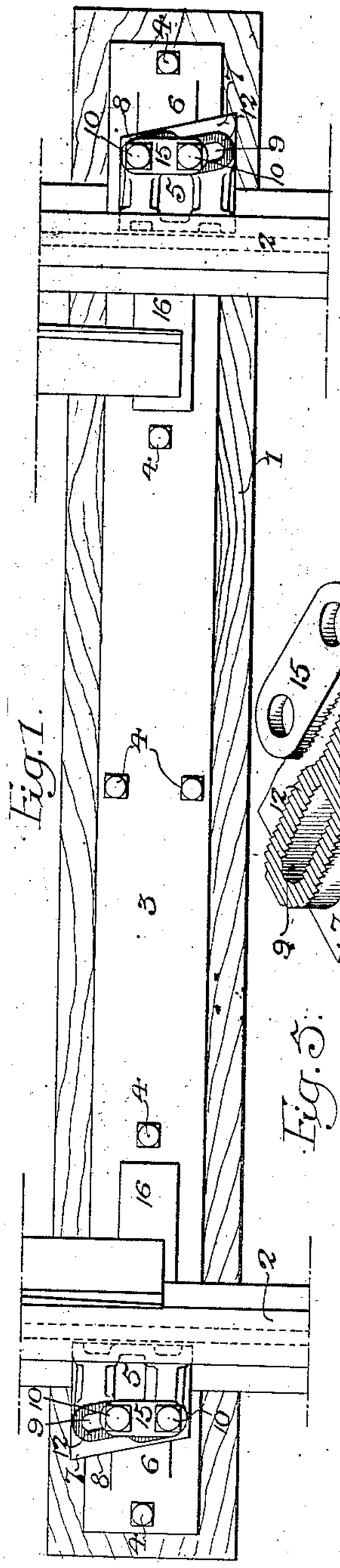

Fig. 1.

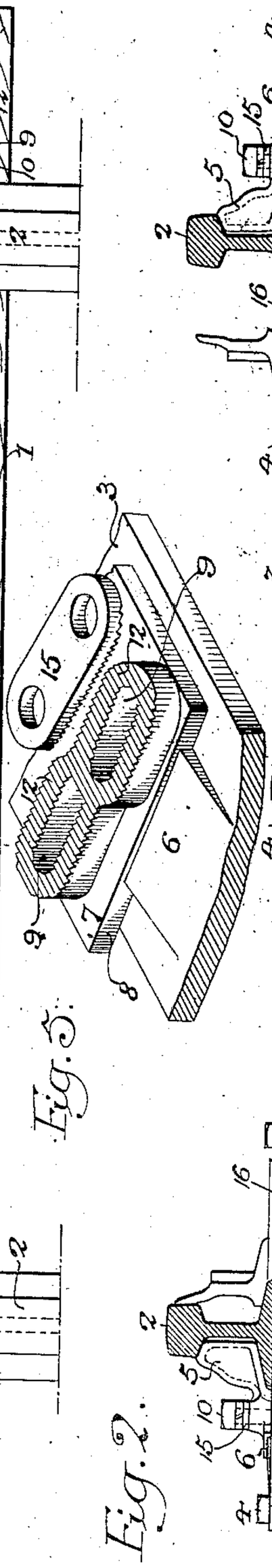

Fig. 5.

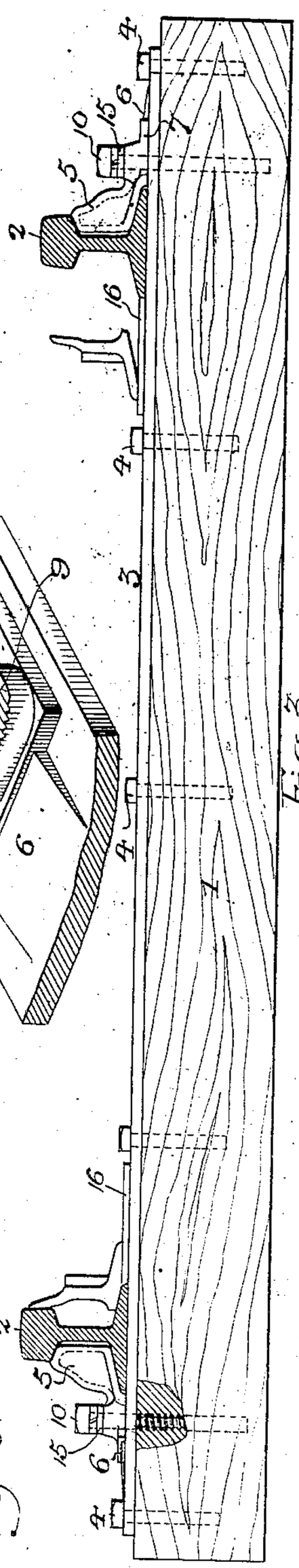

Fig. 2.

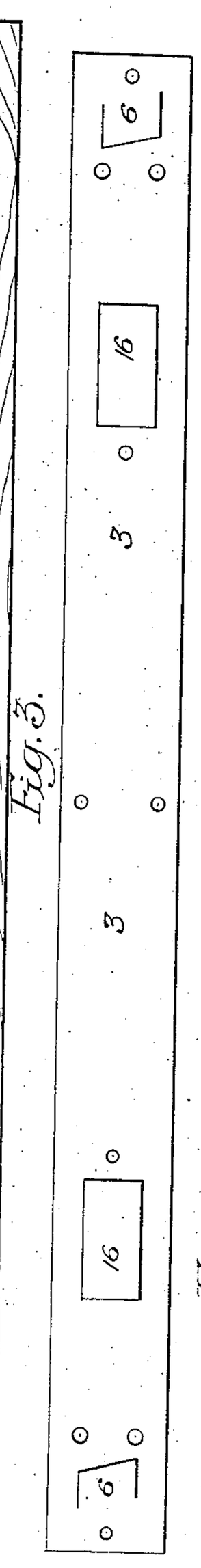

Fig. 3.

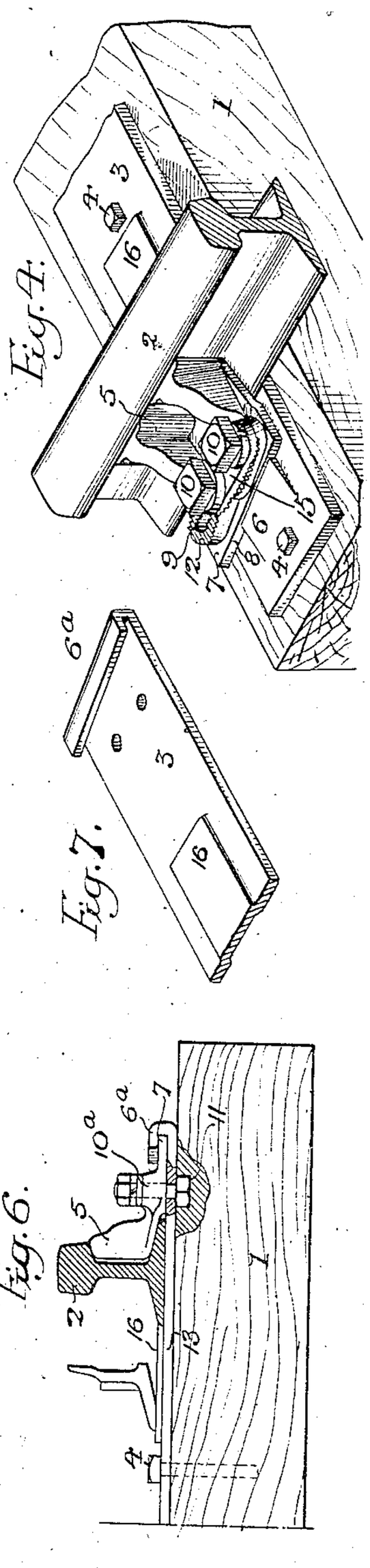

Fig. 4.

Fig. 7.

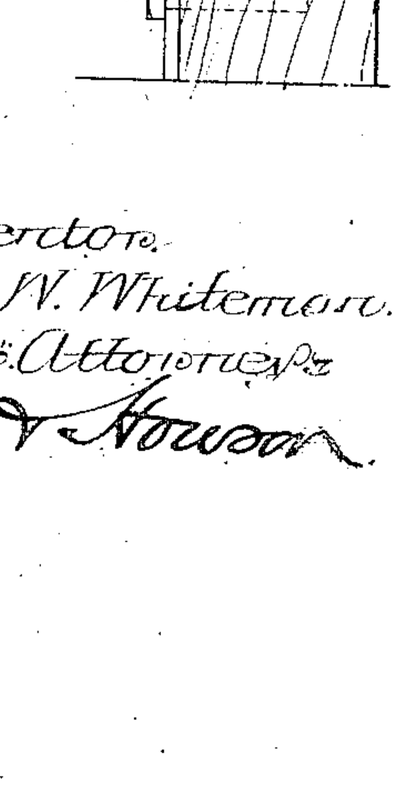

Fig. 6.

Witnesses:-

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UNITED STATES PATENT OFFICE.

GEORGE W. WHITEMAN, OF PHILADELPHIA, PENNSYLVANIA.

RAIL-BRACE AND FASTENING MEANS THEREFOR.

No. 896,049. Specification of Letters Patent. Patented Aug. 11, 1908.

Application filed March 21, 1907. Serial No. 363,736.

To all whom it may concern:

Be it known that I, GEORGE W. WHITEMAN, a citizen of the United States, residing in Philadelphia, Pennsylvania, have invented certain Improvements in Rail-Braces and Fastening Means Therefor, of which the following is a specification.

The object of my invention is to provide an improved form of rail-brace and fastening therefor, which structure is particularly adapted for use adjacent the switch points of railroad or railway tracks, and my invention comprises a structure that is readily adjustable to take up any wear on the inner side of the rail heads; the fastening therefor being one that may be positively secured after such adjustment.

The rail-brace and adjustable fastening means forming the subject of my invention may be employed in connection with ties of any character, whether of metal, wood, or composite structures, but when of wood, a plate, also forming part of my invention, will be combined therewith, being permanently secured to such tie.

My invention is fully shown in the accompanying drawings, in which:

Figure 1, is a plan view of a tie and a portion of the rails adjacent switch points, showing the structure forming the subject of my invention in position of use; Fig. 2, is a view showing side elevations of the structure forming the subject of my invention, mounted in the position of use with respect to the tie and rails; Fig. 3, is a plan view of a tie-plate forming part of my invention; Fig. 4, is a perspective view of my improved rail-brace; Fig. 5, is an enlarged perspective view of a part of the rail-brace, and Figs. 6 and 7, are views illustrating details of my invention.

The fastening means employed in combination with the structure forming the subject of my invention are of the same general form as those disclosed in my prior patents, Nos. 828,793; 828,794, and 828,795, dated August 14, 1906. In the present instance, I have provided duplex fastening means for holding the rail-brace in place; thereby insuring a rigid support for the rail.

In the drawings herewith, 1 represents a tie, which may be of wood, or other material, 2 the rails, and 3 a bridle- or tie-plate permanently secured to the tie and upon which said rails rest; said plate being fastened to the tie by any suitable means, preferably by the bolts or lag screws 4. (The rails may be spiked to the tie on the inner side in the usual manner if desired, although as the pressure of wear is against the inner face of the head outward, it is not necessary to apply any fastening means on the inner side of said rails.) For the outer sides of the rails, however, I provide braces 5 forming the subject of my invention, which are of the same construction and contour for each rail, so as to avoid the necessity of providing rights and lefts.

The plate 3 carried by the tie is provided at or near its ends with angularly faced projections formed by pressing up a part of the plate as at 6, in Figs. 1, 2, 3 and 4, or by turning the end of the same as at 6^a, in Figs. 6 and 7. The rail-brace is provided with a foot 7, beveled at the same angle as said projections, and when applied to the rail, the body of said brace will lie against the head and flange of the rail, while the foot will rest upon the tie-plate; the outer edge 8 of said foot lying in engagement with one of said angular projections.

The foot 7 of the rail-brace is provided with slots 9 parallel with the beveled edge of said foot for the passage of lag screws or bolts; the screws, indicated at 10, being let into the tie from the top, while when bolts 10^a are used, they pass from below through the plate 3, and the tie will be recessed at 11 for the heads of the same. The upper face of said foot 7, is notched or serrated across the slots 9, as indicated at 12, and clearly shown in Figs. 1, 4 and 5, and these notches or serrations may be at right angles to the rail, or at right angles to the beveled edge of the foot, as desired.

Confined by the screws or bolts, and interposed between the heads of the same and the notched or serrated surface of the foot 7 of the rail-brace, is a locking member 15, having independent apertures for said bolts and being notched or serrated on its under face for engagement with the rail-brace foot. While this member is movable vertically on the screws or bolts, which when set up tight normally lock it to the foot of the rail-brace, it is held by said bolts against lateral movement in any direction. It will be seen, therefore, that when this member is held by said screws or bolts in contact with the complementary notched face of the foot of the

rail-brace, the latter will be locked in any position it may be placed between the rail and the engaging projection of the tie-plate.

When it is desired to move a rail to take up wear upon the head of the same, the rail-brace is to be shifted and to accomplish this it is only necessary to back off the screws or bolts a distance sufficient to permit the locking member 15 to be lifted from its engagement with the notched or serrated face of the foot of the rail-brace, and then to move the latter against the rail in its new position until it is wedged between the same and the angular face of the engaging projection of the tie-plate.

When the rail-brace is fixed in its new position, the locking member 15 is dropped into fresh engagement with the notches or serrations on the foot of said brace, the fastening means will be tightened, and said locking member 15 being maintained in fixed position with relation to said fastening means, it serves the purpose of holding the rail-brace in fixed position with relation to said fastening means carried by the tie, or the plate mounted upon the same, thereby maintaining the rails firmly fixed in the desired position.

The tie-plate is provided with the usual wear surfaces 16, which in the present instance are pressed up from the metal of said tie-plate. When my improved rail-brace is employed with metallic ties, the upper surface of the latter may be provided with the angularly faced engaging projections and the wear surfaces.

Instead of providing a special locking member for the rail-brace, the surface of the tie-plate or tie may be notched or serrated, and the under surface of the foot of the rail-brace may be provided with complementary notches or serrations for engagement therewith, the securing means therefor being otherwise the same.

I claim:

1. In combination, a rail brace arranged to engage a rail, a tie-plate on which said rail and brace rest, said rail brace engaging the head and base of the rail and having an inclined foot with a serrated upper surface, an inclined or angularly disposed portion carried by said tie plate and integral therewith engaged by said inclined foot, a complementary serrated member engaging the upper surface of the foot of said rail brace, and means for holding said tie plate and complementary member in fixed relation and clamping said rail brace in adjusted position.

2. In combination, a rail brace for engaging a rail, a tie-plate for supporting the rail and said brace, said rail brace engaging the head and base of the rail and having an angularly inclined foot, with a serrated member for engaging the upper surface of the foot of said brace, said serrated member and tie-plate held in fixed relation and clamping said brace in adjusted position.

3. In combination, a rail brace arranged to engage a rail, a metallic base on which said rail and brace rest, said rail brace engaging the head and base of the rail and having an inclined foot with a serrated upper surface, an inclined or angularly disposed portion carried by said metallic base and integral therewith engaged by said inclined foot, a complementary serrated member engaging the upper surface of the foot of said rail brace, and means for holding said metallic base and complementary member in fixed relation and clamping said rail brace in adjusted position.

4. In combination, a rail brace for engaging the head and base of a rail, a tie plate for supporting the tie and said brace, an angular abutment carried by said plate, said brace having an angularly edged foot for engaging said abutment, whereby it may be wedged between the rail and the said abutment, said foot having a serrated upper surface with slots therein, and clamping means for holding the brace in adjusted position comprising a plate having a serrated surface for engaging the upper surface of said foot and bolts adapted to hold it in fixed relation with said tie.

5. In combination, a rail brace for engaging a rail, a tie-plate for supporting the tie and said brace, an angular abutment carried by said plate, said brace having an angularly edged foot for engaging said abutment, whereby it may be wedged between the rail and the said abutment, said foot having a serrated upper surface with two slots therein, and clamping means for holding the brace in adjusted position comprising a plate having a serrated surface for engaging the upper surface of said foot and two bolts adapted to hold it in fixed relation with said tie.

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

GEORGE W. WHITEMAN.

Witnesses:
MURRAY C. BOYER,
JOS. H. KLEIN.