No. 837,175. PATENTED NOV. 27, 1906.

F. C. ANDERSON.

ADJUSTABLE RAIL BRACE.

APPLICATION FILED MAR. 23, 1906.

Fig. 1.

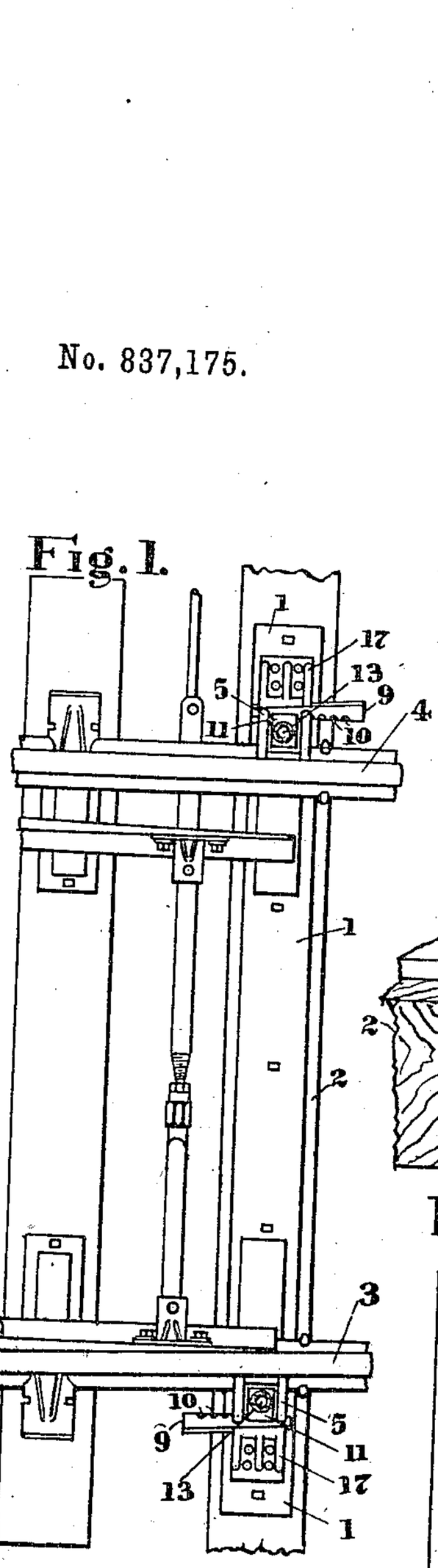

Fig. 6.

Fig. 4.

Fig. 5.

Fig. 2.

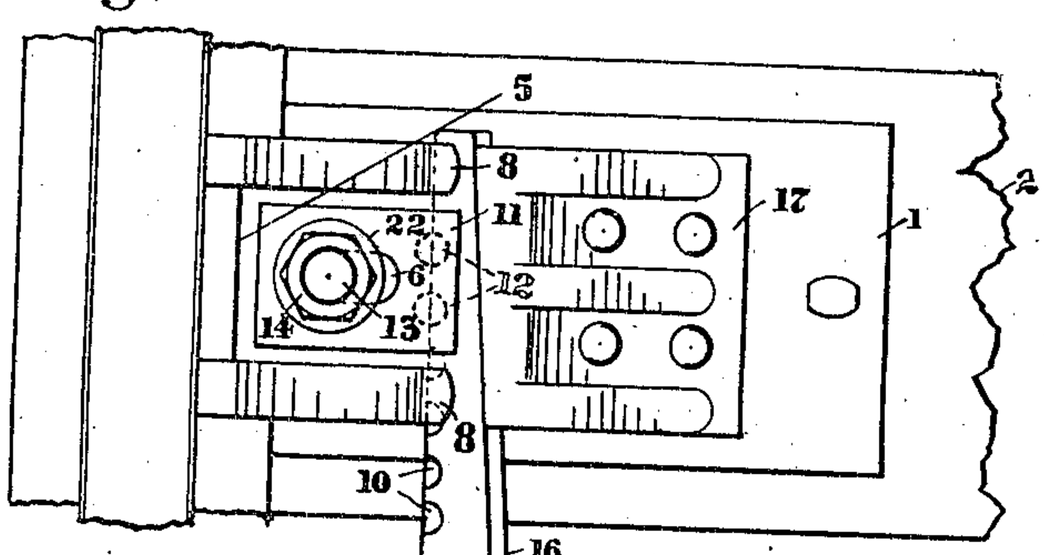

Fig. 7.

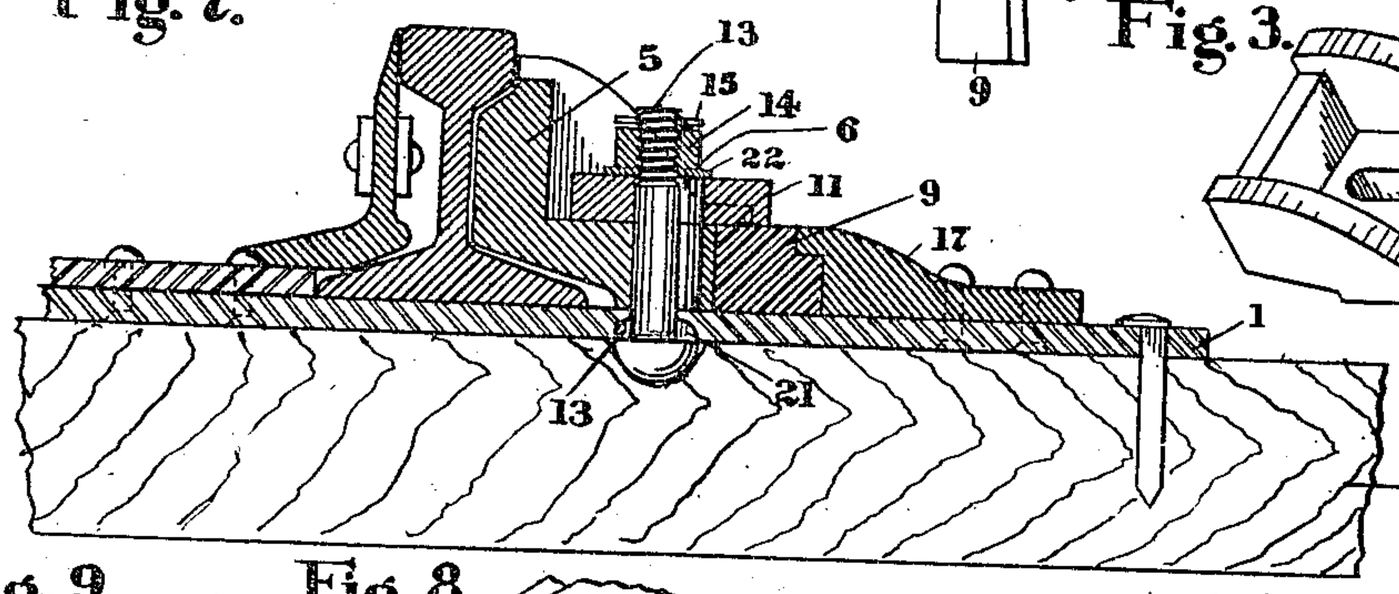

Fig. 3.

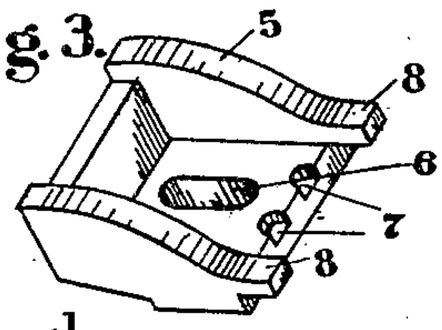

Fig. 9.

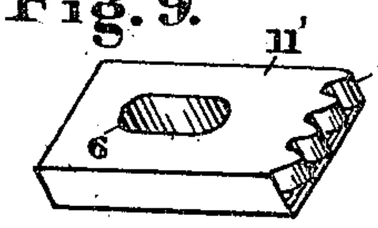

Fig. 8.

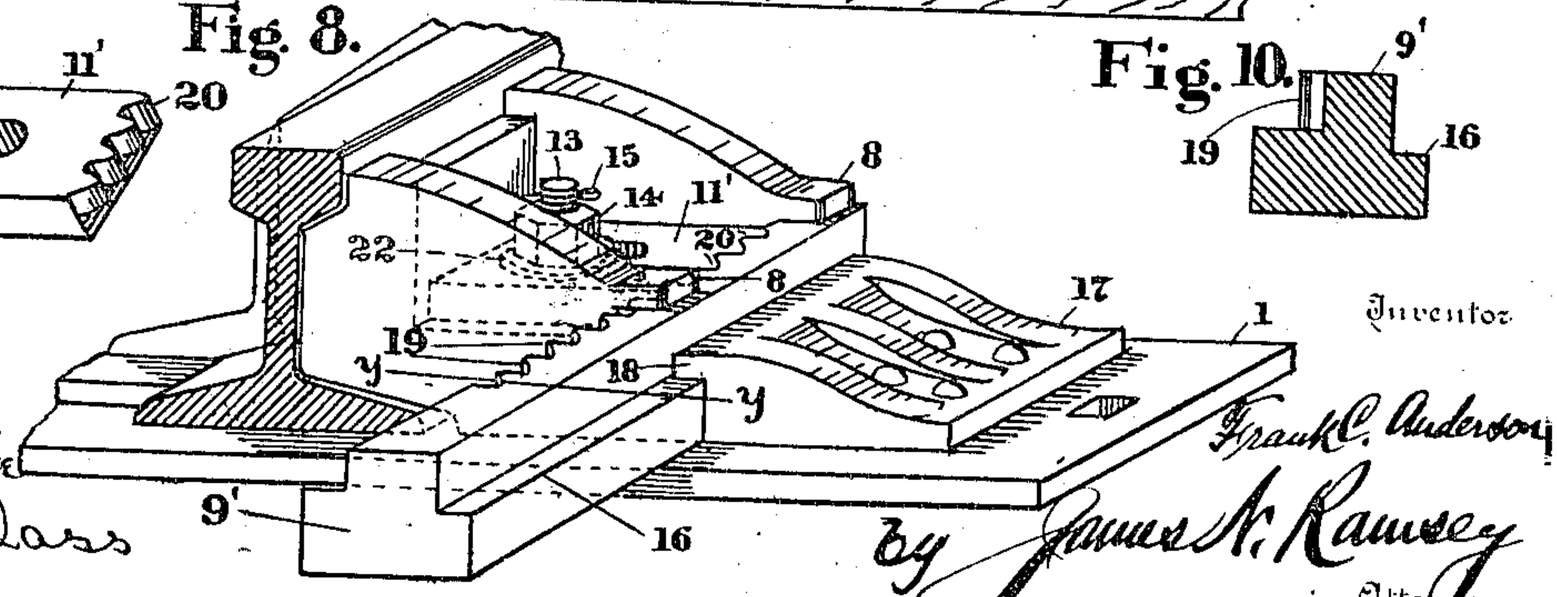

Fig. 10.

Witnesses
Harry Hanke
M. E. Glass

Inventor
Frank C. Anderson
by James M. Ramsey
Attorney

UNITED STATES PATENT OFFICE.

FRANK C. ANDERSON, OF CINCINNATI, OHIO, ASSIGNOR OF ONE-HALF TO THE AMERICAN VALVE & METER COMPANY, OF CINCINNATI, OHIO, A CORPORATION OF WEST VIRGINIA.

ADJUSTABLE RAIL-BRACE.

No. 837,175. Specification of Letters Patent. Patented Nov. 27, 1906.

Application filed March 23, 1906. Serial No. 307,575.

To all whom it may concern:

Be it known that I, FRANK C. ANDERSON, a citizen of the United States, residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Adjustable Rail-Braces, of which the following is a specification.

My invention relates to adjustable rail-braces for adjusting, holding, and gaging the stock and main rails adjacent the point or switch rail.

The object of my invention is to provide a simple device for this purpose which can be conveniently and easily applied and adjusted.

My invention consists in a brace adapted to bear against a rail, a wedge-plate, a wedge adapted to be interposed between said brace and wedge-plate to adjust said rail laterally, and means for holding said wedge and brace in adjusted position.

My invention also consists in the parts and combination and arrangement of parts as herein set forth and claimed.

In the drawings, Figure 1 is a plan view of a track with switch connection, showing my invention applied thereto. Fig. 2 is an enlarged plan view showing a stock-rail held in place by my device. Fig. 3 is a perspective view of the brace. Fig. 4 is a perspective view of the device in position adjacent a stock-rail. Fig. 5 is a bottom perspective view of the lock-plate. Fig. 6 is a cross-section on the line *x x* of Fig. 4. Fig. 7 is a cross-section on the line *z z* of Fig. 4, the bolt and spike being shown in side elevation. Fig. 8 is a perspective view showing a modified construction of my device. Fig. 9 is a perspective view of a modified form of plate. Fig. 10 is a cross-section on the line *y y* of Fig. 8.

My device is preferably constructed substantially as follows: A tie-plate 1 is fixed upon the tie 2, and the stock-rail 3 and main rail 4 rest thereon. A brace 5, formed substantially as shown in Fig. 3 and provided with an elongated bolt-hole 6, notches 7, and projections 8, is mounted upon the tie-plate 1 and against the rail 3 or 4, its side adjacent being made to conform to the shape of the rail. A wedge 9, having recesses 10 upon one side, is adapted to rest upon the tie-plate 1 and bear against one side of the brace 5 beneath the projections 8 and to be held from endwise movement by the lock-plate 11, having lugs 12, adapted to take into the notches 7 and adjacent recesses 10, the lock-plate 11 being secured and held in place by bolt 13, washer 22, nut 14, and spring-cotter 15. The wedge 9 is tapered upon its side opposite the recesses 10 and lengthwise thereof and is provided with a shoulder 16. A wedge-plate 17, provided with an extension 18, adapted to take over and engage the shoulder 16 of the wedge 9, is securely fastened upon the tie-plate 1, said wedge-plate and the extension thereon being tapered to conform to the adjacent taper of the wedge.

In Figs. 8, 9, and 10 I have shown a modified construction of the wedge 9′ and lock-plate 11′ in which the wedge 9′ is extended upwardly, and a row of teeth 19 is formed upon the side thereof and adapted to engage with a similar row of teeth 20 upon the lock-plate 11′ to prevent endwise movement of the wedge 9′. The bolt 13 is preferably provided with fins 21, adapted to take into corresponding openings in the tie-plate 1 to hold the bolt from turning.

In the modified construction the lock-plate 11′ is made longer than the lock-plate 11 in the preferred construction in order that its end opposite the teeth 20 may bear against the wall of the brace 5 to hold the teeth 20 in engagement with the teeth 19, of the wedge 9′.

In order to apply my invention, place the bolt 13 in the tie-plate 1 and secure the tie-plate firmly to the tie or head-block 2 by spikes or other suitable means, the head of bolt 13 being countersunk therein. Place the brace 5 upon the bolt 13 and secure the wedge-plate 17 firmly in position upon the tie-plate 1. Then drive the wedge 9 endwise between the brace 5 and wedge-plate 17 until the rail has been adjusted to the proper gage. Next place the lock-plate 11 upon the bolt 13 and secure it thereto by the washer 22, nut 14, and spring-cotter 15 and spike the rails. After the parts have been placed in position and it is desired to still further adjust the rail to proper position after it has shifted out of gage simply remove the spikes, cotter, nut, washer, and lock-plate and drive the wedge endwise until the brace has forced the rail

into gage. Then replace the lock-plate, washer, nut, spring-cotter, and spikes.

It will be seen that my device is placed upon a tie or head-block at a point opposite the end of the point or switch-rail; but it may be placed at any point along the track where there is more or less shifting of the rails due to traffic or otherwise, such as on a curve.

My invention provides for an adjustment of the main or stock rail, or both, to proper gage and insures greater efficiency in sustaining the rail in proper gage than when it is merely held by spikes and non-adjustable braces. This operation is performed by simply removing the spikes, cotter, nut, washer, and lock-plate, driving the wedge endwise until the rail has been forced to the required position, then replacing the lock-plate, washer, nut, cotter, and spikes, which can be easily, quickly, and conveniently performed.

I claim—

1. In an adjustable rail-brace, a brace, a fixed wedge-plate, a wedge interposed between said wedge-plate and brace to adjust and hold said brace, and means for locking said wedge and brace in adjusted position.

2. In an adjustable rail-brace, a tie-plate, a brace mounted thereon and adapted to bear against an adjacent rail, a fixed wedge-plate mounted upon said tie-plate, a wedge interposed between said wedge-plate and brace to adjust and hold said brace, and means for locking said wedge and brace in adjusted position.

3. In an adjustable rail-brace, a brace, a fixed wedge-plate, a wedge interposed between said wedge-plate and brace to adjust and hold said brace, and a lock-plate adapted to engage and hold said wedge and brace.

4. In an adjustable rail-brace, a brace having projections and notches, a fixed wedge-plate having a tapered edge, a wedge having one side tapered and the other side provided with recesses, and a lock-plate having lugs adapted to enter said notches and recesses to hold the wedge.

5. In an adjustable rail-brace, a brace having projections and notches, a wedge-plate having an extension and tapered adjacent the wedge, a wedge having a tapered edge and shoulder upon one side to engage the extension and tapered edge of the wedge-plate and having recesses upon its opposite side adapted to register with the notches in the brace, a lock-plate having lugs adapted to enter said recesses and notches to lock the wedge in adjusted position and means for holding said lock-plate in engagement with said wedge and brace.

6. In an adjustable rail-brace, a brace having an elongated bolt-hole, a fixed wedge-plate, a wedge interposed between said wedge-plate and brace to adjust and hold said brace, a lock-plate adapted to engage and hold said wedge and having an elongated bolt-hole for the purpose set forth and means for holding said lock-plate.

7. In an adjustable rail-brace, a brace having an elongated bolt-hole, a fixed wedge-plate, a wedge interposed between said wedge-plate and brace to adjust and hold said brace, a lock-plate adapted to engage and hold said wedge and having an elongated bolt-hole for the purpose set forth, a washer upon said lock-plate and means for holding said washer and lock-plate.

8. In an adjustable rail-brace, a brace having projections, a wedge-plate having an extension, a wedge having a shoulder adapted to engage said extension, and means for holding said wedge in adjusted position.

9. In an adjustable rail-brace, a tie-plate secured upon the head-block or tie, a rail mounted thereon, a bolt secured to said tie-plate, a brace mounted upon said tie-plate and adapted to bear against said rail and provided with an elongated bolt-hole to permit lateral movement of the brace, a wedge-plate fixed upon said tie-plate, a wedge interposed between said wedge-plate and brace, a lock-plate, having an elongated bolt-hole, secured to said bolt and adapted to engage and hold said wedge and brace in adjusted position.

10. In an adjustable rail-brace, a brace having an elongated bolt-hole, a wedge-plate, a lock-plate having means for engaging and holding said wedge in locked position and provided with an elongated bolt-hole and a bolt and nut for securing said brace and lock-plate together.

FRANK C. ANDERSON.

Witnesses:
N. PAUL FENNER, JR.,
JAMES N. RAMSEY.