Dec. 25, 1923. 1,478,558

J. C. EDWARDS

ADJUSTABLE RAIL BRACE

Filed Sept. 23, 1921

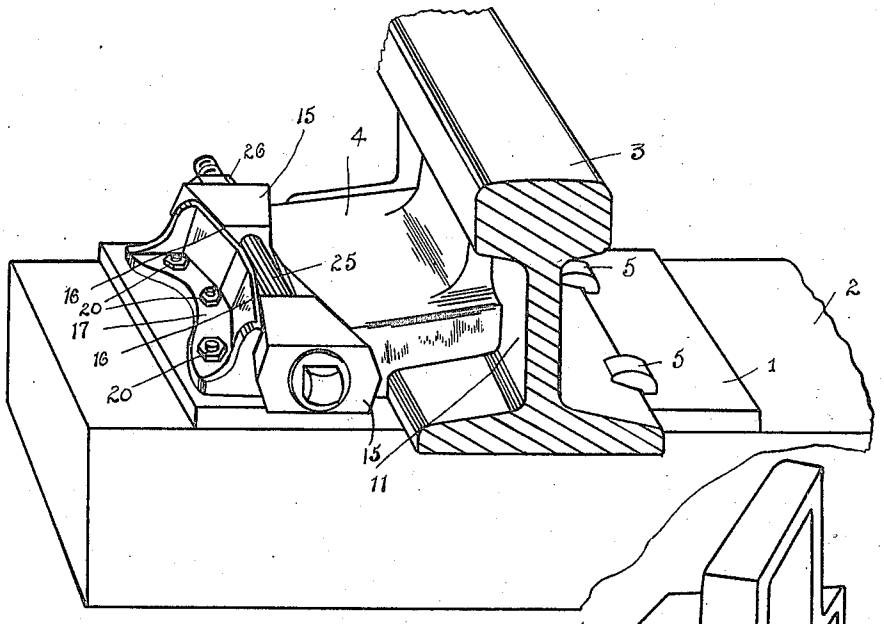


Fig 1

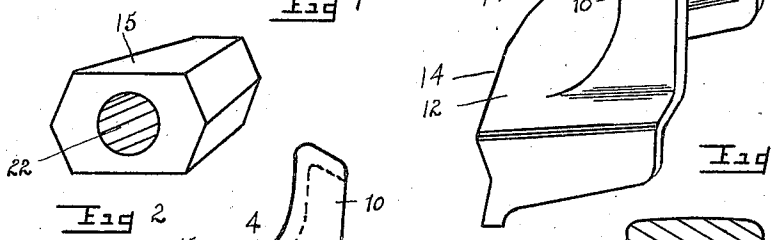


Fig 3

Fig 2

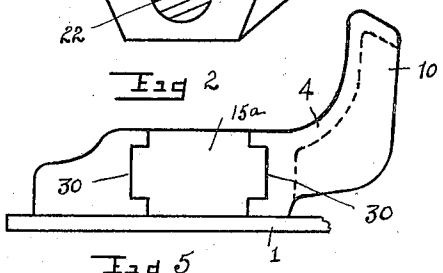


Fig 5

Fig 4

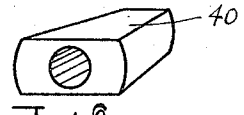


Fig 6

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UNITED STATES PATENT OFFICE.

JOHN C. EDWARDS, OF UTICA, NEW YORK.

ADJUSTABLE RAIL BRACE.

Application filed September 23, 1921. Serial No. 502,627.

To all whom it may concern:

Be it known that I, JOHN C. EDWARDS, a citizen of the United States, residing at Utica, in the county of Oneida and State of New York, have invented certain new and useful Improvements in Adjustable Rail Braces, of which the following is a specification.

My invention relates to an adjustable brace for rails, and I declare the following to be a full, clear, concise and exact description thereof sufficient to enable anyone skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings in which like reference characters refer to like parts throughout the specification.

The object of the invention is to provide a brace adapted to strengthen the lateral support of the rails of a railroad more particularly in the location of switches and curves, whereby to prevent the spreading of the rails at such locations. The device is made also with a wide range of adjustment in order to take up any variation in spread of the rails, resulting from over strain thereon, climatic conditions or other causes.

Furthermore, the device does not necessitate the drilling or slotting of the usual tie plate employed, with the exception of the ordinary holes commonly used in such plates.

Moreover, the projection of the exposed part of the brace vertically above the tie plate is reduced to a minimum, thereby avoiding any danger of said parts catching on low hanging or over hanging parts of trucks passing over the rails.

The object will appear by referring to the drawings, in which:

Fig. 1 is a perspective view of the rail brace, showing a section of a rail in its relation to the brace, and also showing certain parts broken away;

Fig. 2 is an enlarged detail view of a wedge employed;

Fig. 3 is an enlarged detail view of a bracket used;

Fig. 4 is an end elevation of the brace, shown in its relation to a rail, which is in section, and other parts being shown broken away;

Fig. 5 is a detail view, somewhat smaller in scale, showing a certain modification of one of the wedges and corelated parts employed;

Fig. 6 is a detail perspective view of a modified form of wedge employed.

Referring more particularly to the drawings, the device embodies a plate —1— that is spiked to a railway tie 2. The plate —1— supports a rail 3 that is held in place by the metallic bracket 4 on the one side and spikes 5 on the other.

Bracket 4 is made hollow for the purpose of lightening the same and is equipped with an upstanding part 10 that is adapted to lie adjacent the web part 11 of rail 3. Part 12 of bracket 4 has converging sides 14, 14. Said sides are also formed with a reentrant angle whereby to co-operate with the correspondingly formed angularly disposed sides of adjustable wedges 15, 15. Wedges 15 are mounted in a movable manner between the converging sides 14, 14 of bracket 4 and the converging sides 16, 16 of a second bracket 17 that is held to plate —1— by headed rivets 20, 20. The heads of rivets 20 are countersunk in plate —1—.

Movable wedges 15, 15 are each equipped with a central aperture 22 for the projection therethrough of an elongated headed tie bolt 25. A nut 26 is applied to the threaded end of bolt 25. The turning of nut 26 will adjust the position of wedges 15, 15 with reference to each other, whereby they will press more or less closely against the adjacent side of bracket 4 to hold rail 3 in correct position. That is, when nut 26 is tightened on bolt 25, the wedges 15 will be drawn towards each other and, thereby, force the bracket 4 towards rail 3. The turning of nut 26 in the opposite direction will allow the wedges 15 to recede from the space between their contiguous converging surfaces 14, 14 and 16, 16, whereby to allow the bracket 4 to be withdrawn to any given degree from the side of rail 3.

One of the wedges 15 may be constructed with a threaded aperture for the reception of the threaded end of bolt 25, whereby to eliminate the use of nut 26 and also avoid the projection of the end of said bolt 25 beyond the far edge of wedge 15.

Fig. 5 shows a modified manner of constructing the wedges 15, 15. In this construction the wedges 15^a are formed with lateral flanges 30, 30 projecting from op-

posite sides thereof and adapted to fit into corresponding recesses made in the sides of bracket 4 and of bracket 17, whereby to limit the vertical movement of said wedges 15.

The modified form of wedge shown in Fig. 6 is constructed with convex sides adapted to fit into a passageway having corresponding sides, whereby to limit the vertical movement of said wedge. The convex sides of wedge 40 perform the same function that the angled sides of wedges 15 and the flanges 30 of Fig. 5 perform.

Having thus described my invention what I claim as new and desire to secure by Letters Patent is:

1. In an adjustable brace for rails, wedge shaped parts bolted together for holding a rail in place, means located adjacent said rail and having re-entrant angles formed therein, and the sides of said wedges being formed with angularly disposed surfaces to co-operate with said re-entrant angles of said means, whereby to hold the said means and wedges in given relation to each other.

2. In an adjustable brace for rails, a plurality of wedge shaped parts bolted together for holding a rail in place, brackets located adjacent said rail and having re-entrant angles formed therein, and the sides of said wedges being formed with angularly disposed surfacees to co-operate with said re-entrant angles of said brackets, whereby to hold the brackets and wedges in given relation to each other.

3. In an adjustable brace for rails, wedge shaped parts bolted together for holding a rail in place, brackets located adjacent said rail, and having re-entrant angles formed therein, the sides of said wedges being formed with angularly disposed surfaces to co-operate with said re-entrant angles of said brackets, whereby to hold the brackets and wedges in given relation to each other, and said brackets being separated, whereby to permit the movement of the wedges therebetween.

In testimony whereof I have affixed my signature.

JOHN C. EDWARDS.

Witnesses:

WILLIAM F. BOSSERT,

WILLIAM R. BURKE.