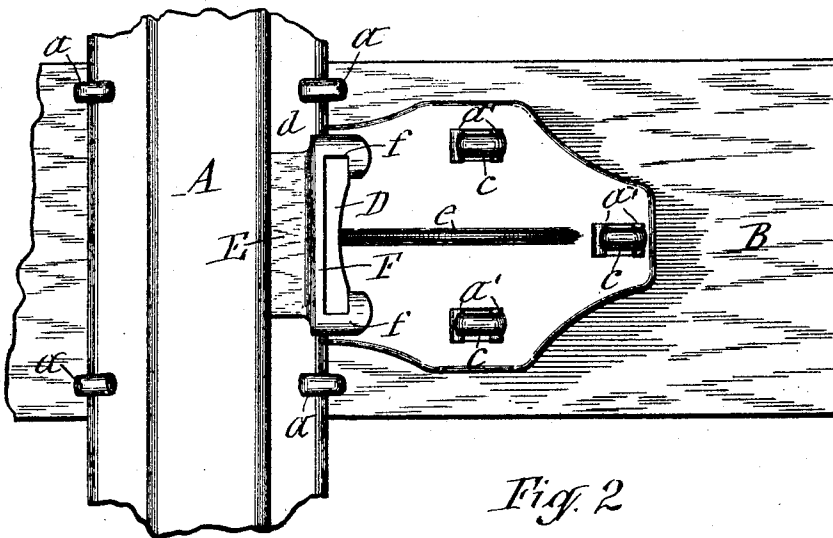
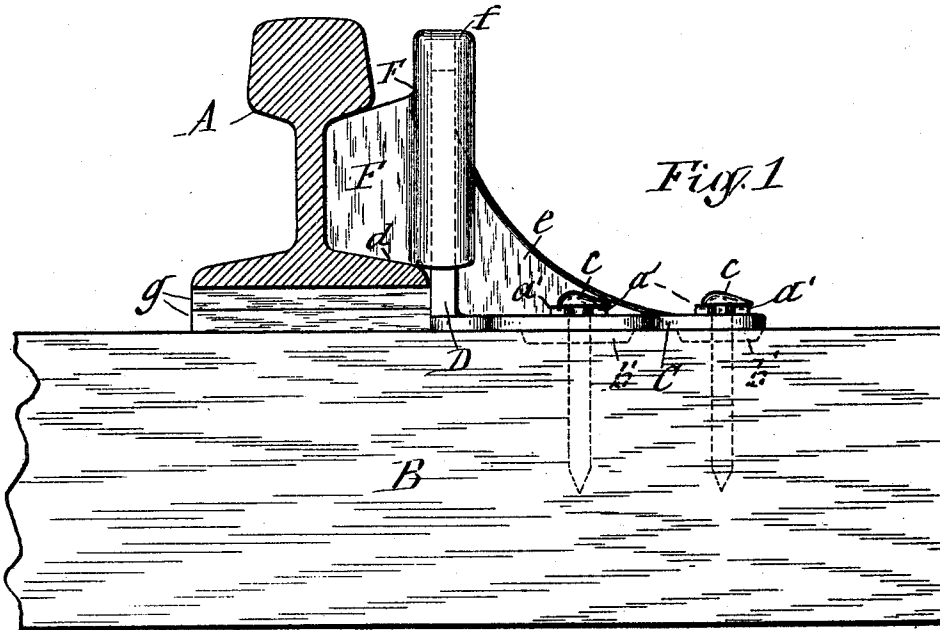


No. 795,010.

PATENTED JULY 18, 1905.

H. H. SPONENBURG.
RAILWAY RAIL BRACE.
APPLICATION FILED FEB. 4, 1905.

2 SHEETS--SHEET 1.



WITNESSES:

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2 SHEETS—SHEET 2.

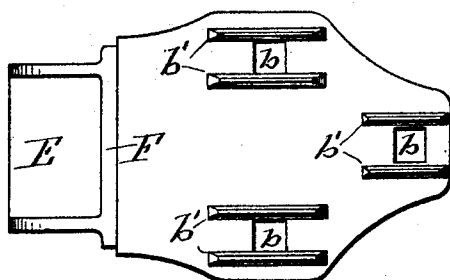


Fig. 3.

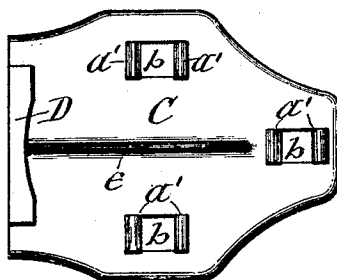


Fig. 4.

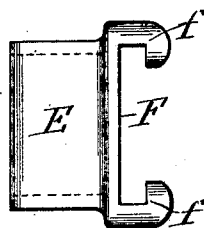


Fig. 5.

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UNITED STATES PATENT OFFICE.

HIRAM H. SPONENBURG, OF WADSWORTH, ILLINOIS, ASSIGNOR OF ONE-HALF TO EDWARD LAAS, OF OTTUMWA, IOWA.

RAILWAY-RAIL BRACE.

SPECIFICATION forming part of Letters Patent No. 795,010, dated July 18, 1905.

Application filed February 4, 1905. Serial No. 244,089.

To all whom it may concern:

Be it known that I, HIRAM H. SPONENBURG, of Wadsworth, in the county of Lake, in the State of Illinois, have invented new and useful
 5 Improvements in Railway-Rail Braces, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

The object of this invention is to provide
 10 simple, convenient, and efficient means for sustaining a railway-rail securely in proper alinement with the track and in perfect gage where said rail is required to be raised from the cross-tie or its foundation, such condition occurring
 15 in winter when the tie is frozen to its bed and when a portion of the track has to be raised and alined as aforesaid; and to that end the invention consists, essentially, of a rail-brace comprising a rigid base and a vertically-mov-
 20 able breast abutting against the sides of the rail and sustained on said base.

The invention also consists in certain novel details of construction, as hereinafter fully described, and set forth in the claims.

25 In the accompanying drawings, Figure 1 is a side view of my improved brace applied to a rail and cross-tie. Fig. 2 is a plan view of the same. Fig. 3 is a detached inverted plan view of the brace. Fig. 4 is a detail plan view
 30 of the base of the brace, and Fig. 5 is a detail plan view of the rail-abutting breast.

Similar letters of reference indicate corresponding parts.

A denotes the well-known T-rail, which is
 35 secured to the cross-tie B by means of the usual spikes *a a*.

C represents the base of the rail-brace, which consists of a cast-metal plate preferably elongated and disposed flatwise and length-
 40 wise upon the cross-tie B. This base-plate is provided with a series of square apertures *b b* for the reception of spikes *c c*, by which the same is rigidly secured to said cross-tie. In
 45 order to permit these latter spikes to be easily withdrawn when required, I form the top face of the base-plate C with lugs *a' a'*, disposed transverse of the plate and at opposite edges of the apertures *b b*, upon which lugs the
 heads of the spikes bear, as clearly shown in

Figs. 1 and 2 of the drawings. This permits
 the usual and well-known claw-bar to be read- 50
 ily inserted under the heads of the spikes for the purpose stated. The bottom face of said base-plate is formed with a series of ribs *b' b'*, which are preferably wedge-shaped in cross- 55
 section and disposed in pairs extending lengthwise of the plate and at the opposite edges of the apertures *b b*. When the said spikes *c c*
 are driven firmly into the cross-tie, said ribs become embedded in the cross-tie and assist 60
 the spikes in retaining the base-plate in its position, as clearly shown in Figs. 1 and 3 of the drawings. Said base-plate is formed at
 its inner end with a post D, consisting of a plate facing the rail A and placed in position 65
 to either abut against the flange *d* of the rail, as more clearly shown in Fig. 1 of the draw-
 ings, or to stand a short distance from the rail. A web *e*, extending from the base to the
 post, serves to brace said post so as to enable 70
 it to more effectually resist the side pressure of the rail.

E denotes a breast which is shaped to abut
 against the stem of the rail A and bear on
 top of the rail-flange and preferably also on 75
 the under side of the head of the rail. Said breast projects from a back plate F, which is
 provided with suitable guides by which it is sustained vertically movable on the aforesaid
 post D, which guides are preferably of the 80
 form of vertically-grooved flanges *f f*, embracing the edges of the post, as shown in Figs.
 2 and 5 of the drawings. The breast E is
 thus enabled to adjust itself to any vertical
 disturbance of the rail from its underlying 85
 cross-tie or sleeper. Said adjustability of the breast is especially important during the win-
 ter, when the track is heaved by frost in the
 road-bed, and portions of the rail are raised
 from the cross-ties and require shims *g* to 90
 be inserted between the bottom of the rail and underlying cross-tie, as shown in Fig. 1
 of the drawings. It will be observed that
 in the said operation the breast E is maintained
 in contact with the rail and supported by the
 rigid post D of the base-plate C, which is se-
 curely fastened to the cross-tie.

What I claim is—

1. A railway-rail brace comprising a suitably-supported rigid member, and a movable member abutting against the side of the rail and sustained on said rigid member, as set forth. 5
2. A railway-rail brace comprising a rigid base, and a vertically-movable breast abutting against the rail and sustained on said base, as set forth.
- 10 3. A railway-rail brace comprising a rigid base supported on the cross-tie and provided with a post, and a vertically-movable breast sustained on said post and abutting against the side of the rail, as set forth.
- 15 4. A railway-rail brace comprising a base rigidly fastened to the cross-tie and abutting against the rail-flange, a post rigidly sustained by said base, and a breast sustained vertically movable on said post and abutting against the 20 stem of the rail, as set forth.
5. A railway-rail brace comprising a rigid base, and a vertically-movable breast projecting from a back plate sustained on the base, as set forth.
- 25 6. A railway-rail brace comprising a base rigidly fastened to the cross-tie and provided with a rigid post, and a breast provided with guides by which it is sustained vertically movable on said post and abutting against the side of the rail, as set forth. 30
7. A railway-rail brace comprising a base-plate fastened to the cross-tie and provided with projections on its bottom face embedded in the cross-tie, a rigid post on said base-plate, and a breast supported vertically movable on 35 said post and abutting against the side of the rail, as set forth.
8. A railway-rail brace supported on the cross-tie and abutting against the side of the rail and comprising a base-plate provided with 40 spike-receiving apertures and formed on its upper face with lugs disposed at opposite edges of the apertures upon which the heads of the spikes bear, for the purpose set forth.
9. A railway-rail brace supported on the 45 cross-tie and abutting against the side of the rail and comprising a base-plate provided with spike-receiving apertures and formed on its upper face with lugs disposed at opposite edges 50 of the apertures and formed on its bottom face with ribs wedge-shaped in cross-section and embedded in the cross-tie, as set forth.

HIRAM H. SPONENBURG. [L. s.]

Witnesses:

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FRED A. DURST.