

(No Model.)

A. B. SNIDER & W. H. ROBERTS.
RAIL SHOE AND BRACE.

No. 511,170.

Patented Dec. 19, 1893.

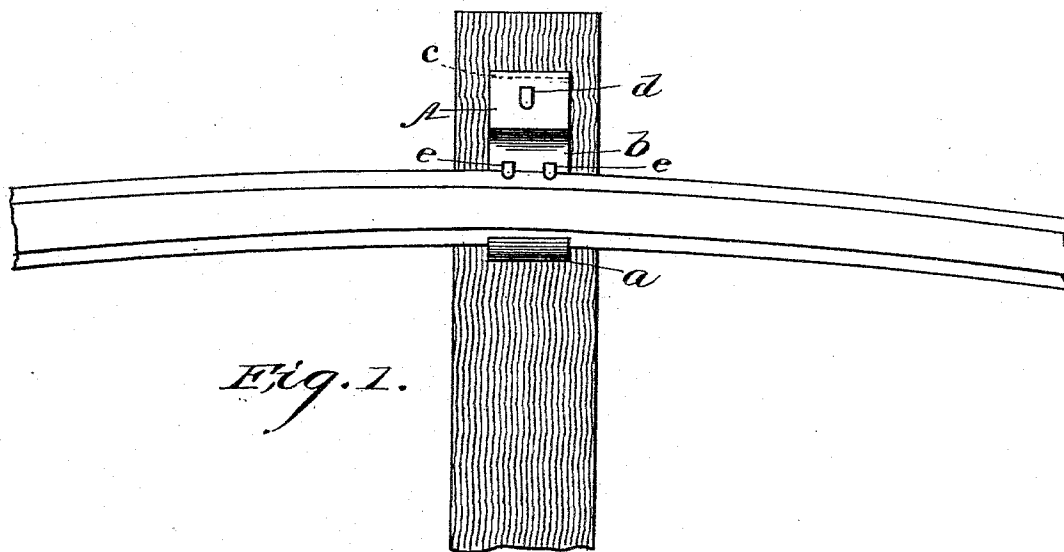


Fig. 1.

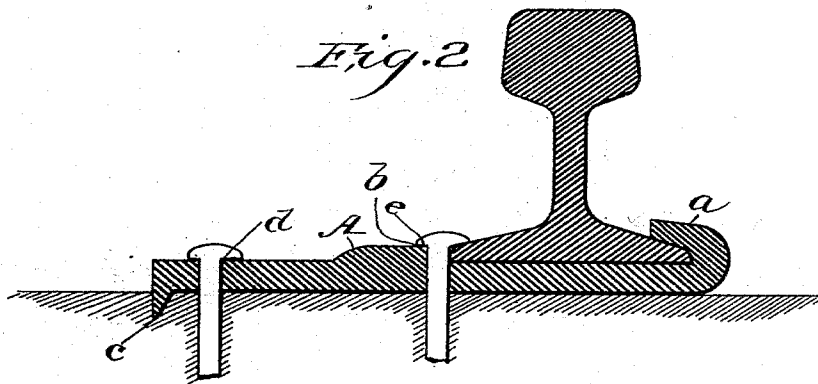


Fig. 2.

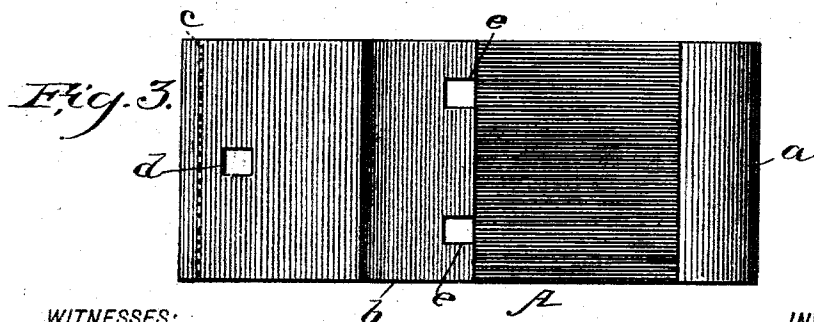


Fig. 3.

WITNESSES:

Fred G. Dieterich
Edw. W. Byer.

INVENTORS:

Andrew B. Snider
William H. Roberts

BY

Mun. T. G.

ATTORNEYS.

UNITED STATES PATENT OFFICE.

ANDREW B. SNIDER AND WILLIAM H. ROBERTS, OF BARTHOLOW'S,
MARYLAND.

RAIL SHOE AND BRACE.

SPECIFICATION forming part of Letters Patent No. 511,170, dated December 19, 1893.

Application filed August 26, 1893. Serial No. 484,109. (No model.)

To all whom it may concern:

Be it known that we, ANDREW B. SNIDER and WILLIAM H. ROBERTS, of Bartholow's, in the county of Frederick and State of Maryland, have invented a new and useful Improvement in Rail Shoes and Braces, of which the following is a specification.

The object of our invention is to provide a rail shoe and brace for holding rail road rails on curves so as to better resist the tendency of the car wheels to displace the rails laterally from the centrifugal action of the train, and it consists in the peculiar construction of a plate made in one piece and provided with spike holes for connecting it to the ties as will be hereinafter fully described.

Figure 1 is a plan view of a portion of a railway track showing our invention applied. Fig. 2 is an enlarged section taken through the rail shoe and brace transversely to the rail, and Fig. 3 is a plan view of the rail shoe and brace alone.

In the drawings A represents a metal plate having at one end a seat for the base of the rail, which seat is formed by an overhanging lip *a* at one edge, and a shoulder *b* on the other side, the shoulder being formed by an increased thickness of the plate about its middle. The bottom of the plate is perfectly flat, but has at its end opposite the overhanging flange *a* a downwardly projecting sharp-edged flange *c* whose outer face is at right angles to the plane of the plate, and whose inner face is beveled or inclined. Near the flange *c* there is a spike hole *d*, and at the edge of the seat for the base of the rail there are two other spike holes *e e* which open through the shoulder *b* so as to allow the head of the spikes to overlap and bear upon the base of the rail.

When this shoe or brace is to be applied, it is adjusted to the tie with the sharp edged flange *c* buried in the cross tie on the outer bend of the rail, and spikes are driven through the holes *d* and *e e* which serve at the same time to fasten the shoe to the tie, and secure the rail in the shoe, the two spikes

in holes *e e* serving in connection with the overhanging flange *a* to firmly hold the rail to its place in the seat. When thus adjusted it will be seen that the lateral strain of the train on the rail in passing curves is borne not simply by the spikes, but also by the flange *c* which is embedded in the cross tie, and a solid resistance or brace is thus afforded to resist such strain.

We are aware that it is not broadly new to provide a rail road chair in which the base of the rail is secured on one side by an overhanging flange and on the other side by a shoulder and spikes as shown for instance in expired Patent No. 15,036, dated June 3, 1856. We are also aware that a rail road tie plate has been provided with a sharpened rib or flange on its under side that penetrates the tie, as shown, for example, in Patent No. 485,030, dated October 25, 1892, and we make no broad claim to these features. Our invention is distinctive in the fact that the plate is extended a considerable distance farther on one side of the rail than it is on the other, and the spike holes are exclusively in this extended side of the plate. This gives a better leverage to the plate for resisting lateral strain, and the spike holes are also widely separated, so that if the wood becomes rotten around one of the spike holes, the stability of the others is not impaired. Furthermore the sharp flange *c* being on the extreme outer edge of the plate it catches the wood of tie where it is not perforated or impaired in strength by penetration of the spikes.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. The rail shoe and brace, consisting of a plate having on one side a simple, imperforate, hook shaped rail-base flange *a*, and having on the other side a shoulder *b* forming a rail seat between them, with spike holes *e e* at the edge of the shoulder and opening into the rail seat the said plate being extended upon one side horizontally and provided with

spike holes located exclusively within this extended side of the plate substantially as shown and described.

2. The rail shoe and brace consisting of a
5 plate having on one side an overhanging flange
a, a thickened middle portion with shoulder d,
an extended side with a downwardly project-
ing sharp flange c at its edge, spike holes e e
extending through the shoulder b, and a spike
10 hole d arranged in the extended portion of

the plate upon the same side of the rail with
holes e e substantially as and for the purpose
described.

ANDREW B. SNIDER.

WILLIAM H. ^{his} X ROBERTS.
mark

Witnesses:

LEONARD O. MCKINZIE,
WILLIAM B. HOOD.