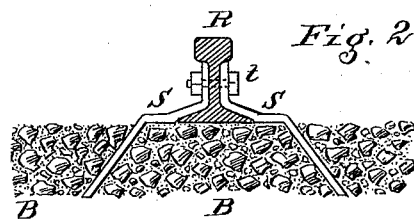
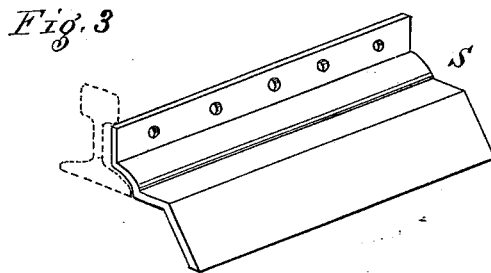
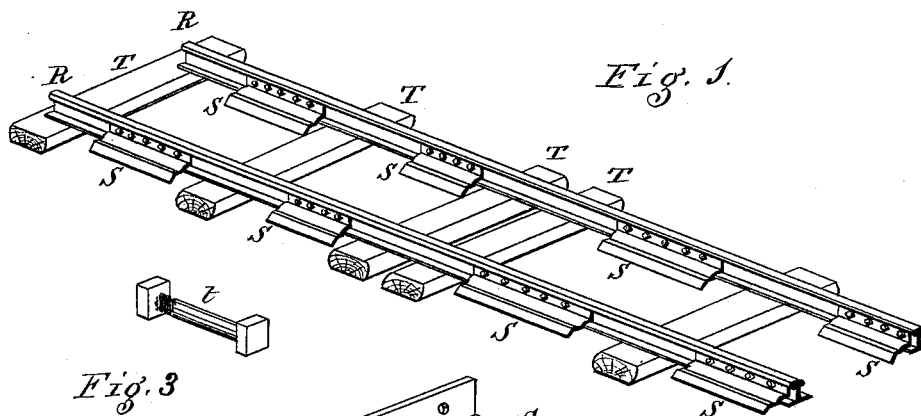


J. KELLER.
Rail-Supporting Shoe-Plate.

No. 218,442.

Patented Aug. 12, 1879.



WITNESSES:

A. S. Spruier
Jacob Stauffer

INVENTOR

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UNITED STATES PATENT OFFICE

JOHN KELLER, OF LANCASTER, PENNSYLVANIA.

IMPROVEMENT IN RAIL-SUPPORTING SHOE-PLATES.

Specification forming part of Letters Patent No. **218,442**, dated August 12, 1879; application filed June 5, 1879.

To all whom it may concern:

Be it known that I, JOHN KELLER, of the city and county of Lancaster, in the State of Pennsylvania, have invented certain Improvements in Rail-Supporting Shoes in Railroads, of which the following is a specification.

This invention relates to a class of devices for supporting the rails intermediate between the ordinary cross-ties in railroad-tracks, for the purpose herein more fully set forth, in the manner specified.

The accompanying drawings, with the letters of reference marked thereon, and a brief description, will enable those skilled in the art to make and apply the same.

Figure 1 shows two rails with the ordinary cross-ties and the intermediate shoe-supports in place. Fig. 2 is an enlarged end view of the combined plates on the rail. Fig. 3 shows a single plate in perspective, enlarged, with a bolt and nut.

What I term the "shoe plate or plates," used in pairs, consists of a plate of sufficient thickness, formed out of wrought-iron or steel, by rolling or otherwise, having a straight or vertical flange to fit between the flange and base of an ordinary rail, R, and then carried to the edge of the base, and flared out horizontally and downward and outward beyond the base to the road-bed or of the height of an ordinary cross-tie. These plates S are pierced for bolts through the vertical flange, as is also the web of the rail R, so as to match those in the plates. One plate is fitted to each side, and both are opposite each other on the rail and bolted with heavy-headed bolts, and secured by nuts as fish-plates, or otherwise, to form the two supports S S for the rail. These plates may be of any desired length, and differ in that respect as to the object had in view, whether it be to dispense with one, two, or more intermediate cross-ties, T, in each length of rail R. There are usually sixteen cross-ties to a thirty-foot rail, the roadway being ballasted, as seen at B, in the ordinary way, and to the usual depth, and well tamped in between the space of the shoe-plates, and on their outside the plates are very firmly seated. It is verily believed a more easy mode of laying track than laying the sill and spiking the rail to it.

I am aware that the expense of good wooden cross-ties has led to various devices, with a

view to provide intermediate supports for the rails in railroad-tracks—such, for instance, as short piles or stout stakes driven perpendicularly in the ground with a pile-driver, at proper intervals, and iron or steel rods to bind each rail firmly to its place. Such a device I disclaim for obvious reasons. Having had practical acquaintance with railways for many years I know the difficulty and necessity in the case of intermediate supports, and piles or stakes will not answer. The shoe-plates I propose to use may be of a length to support the rail to the exclusion of one, two, or three intermediate cross-ties. These plates, being flared out below, when well tamped and ballasted, form a solid, wide, immovable base that will set firm, and no thumping of the cars can sink or wear them, and no iron or steel rods will be required. These plates are readily rolled out of iron or steel, and easily adjusted to the level of the rail when bolted to its sides, and are as durable as they are convenient. A coat of asphaltum or the like may be applied to increase their durability, and in the end will be found cheaper than any wooden cross-ties or stakes used for that purpose.

I do not claim metal castings or plates secured to the sleepers of the track and clasp ing the rails; nor do I claim, broadly, such plates employed as a substitute for cross-ties and set in the ballast; but

What I do claim as new, and desire to secure by Letters Patent, is—

1. In combination with the rails of a railway, the plates S S, each having a vertical upper part adapted to be bolted to the neck of a rail, a curved or inclined part adapted to fit the foot of the rail, a flat part for widening the base of the rail, and a long inclined part adapted to extend down into the road-bed and thus secure the rails in position.

2. The plates S, in combination with the rails and alternating cross-ties of a railway, said plates being constructed to fit snugly to said rails, and provided with a horizontal part and a downwardly and outwardly inclined part, substantially as set forth.

JOHN KELLER.

Witnesses:

A. K. SPURRIER,
JACOB STAUFFER.