(No Model.)

P. P. SMITH.

RAILWAY RAIL FASTENING.

No. 353,601. Patented Nov. 30, 1886.

Fig. 1.

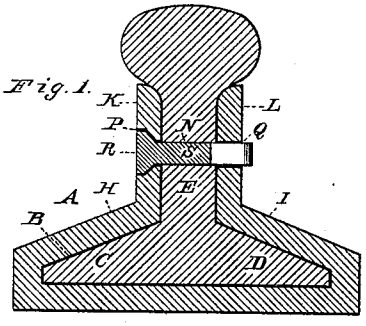


Fig. 2.

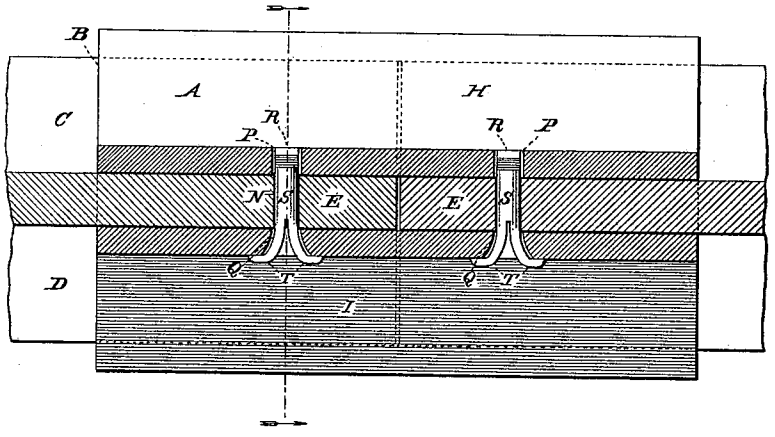
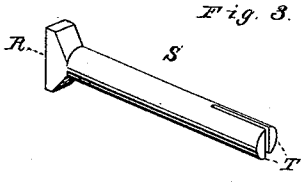


Fig. 3.



WITNESSES

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RAILWAY-RAIL FASTENING.

SPECIFICATION forming part of Letters Patent No. 353,601, dated November 30, 1886.

Application filed August 27, 1886. Serial No. 212,004. (No model.)

To all whom it may concern:

Be it known that I, PARKER P. SMITH, a citizen of the United States, and a resident of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Railway-Rail Fastenings; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

Figure 1 of the drawings is a representation of this invention, and is a vertical section, taken where the broken line is marked on Fig. 2. Fig. 2 is a horizontal section. Fig. 3 is a detail and a perspective view of the pin.

My invention relates to railroad-rail fastenings; and it consists in the construction and novel combination of parts, as hereinafter fully described, and pointed out in the claim.

Referring by letter to the accompanying drawings, A designates the rail-chair, which is cast in one piece and is provided with a rail-seat, B, which in outline in cross-section corresponds to the outline in cross-section of the base-flanges C D and the web E of the rail. The rail-chair A is provided on the inner edges of the upwardly and inwardly inclined face portions H I with vertical parallel flanges K L, having rounded or downwardly and inwardly curved upper edges, which are designed to conform to the curves on the under faces of the head of the rail.

The webs E of the rails are provided with slots N, for the passage of the keys, hereinafter described. The flanges K L are provided with key-holes P and Q, those P, in the flange K, having rectangularly-countersunk openings, and those Q, in the flange L, being horizontally elongated. The rectangular countersunk openings of the flange K, around the holes P, are designed to receive the rectangular heads R of the keys S, said heads when in position being flush with the surface of the flange.

In the flange L the apertures Q are made flaring from the inside outwardly, so that the split points T of the keys S may be spread or bent outwardly in said holes and forced against the face of the web of the rail to form a lock, which will hold said keys in place. The rectangular heads of the keys prevent the arms from turning in their seats, and the split ends prevent the withdrawal of said keys from their seats in the rail and chair flanges, so that threaded bolts and nuts are entirely dispensed with in this rail-fastening. The rail-chair is usually in practice about twenty inches long, so that ten inches at the end of each rail is seated and firmly secured therein, these rail ends meeting at the middle of the chair. The slots in the web of the rail are made long enough to provide for the expansion and contraction of the metal of the rails in hot and cold weather, so that the fastening will not break from either of these causes, and yet the fastening will be perfectly safe and secure.

Having described this invention, what I claim, and desire to secure by Letters Patent, is—

The combination, with the rail-chair provided with the parallel vertical flange-extensions K L of its inclined portions abutting against the heads of the rail, and provided, respectively, with the rectangularly-countersunk and horizontally-elongated and flaring key-holes P Q, of the rails having slotted webs and the rectangularly-headed keys having split ends spread against the webs of the rail ends, substantially as specified.

In testimony whereof I affix my signature in presence of two witnesses.

PARKER P. SMITH.

Witnesses:
JOHN H. CRATTY,
C. HARRISON.