P. F. & E. A. KING.

Railway-Rail Joint-Fastenings.

No. 167,260. Patented Aug. 31, 1875.

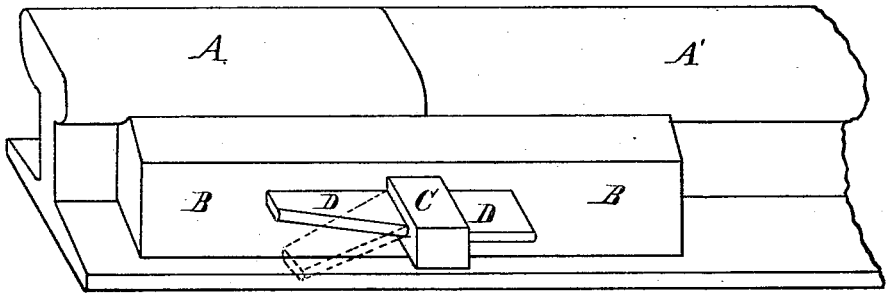

Fig. 1.

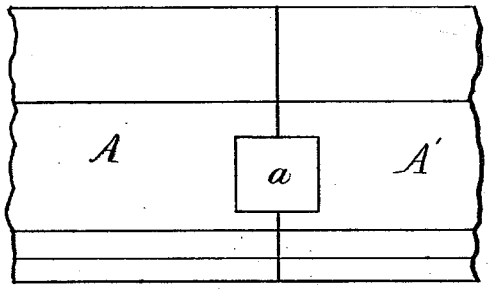

Fig. 2.

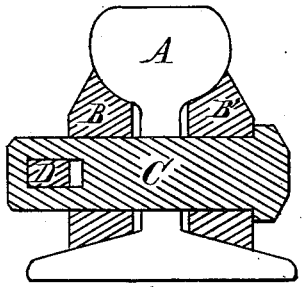

Fig. 3.

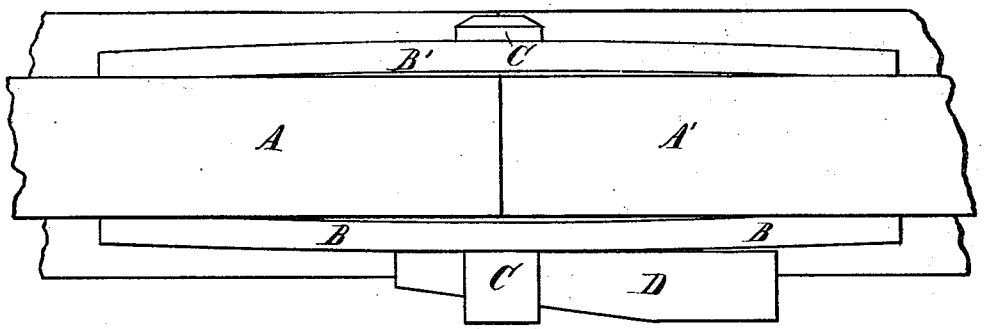

Fig. 4.

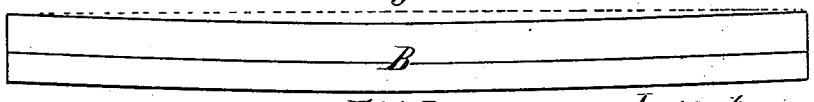

Fig. 5.

Witnesses:
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UNITED STATES PATENT OFFICE.

PHINEAS F. KING AND EDWIN A. KING, OF ST. LOUIS, MISSOURI.

IMPROVEMENT IN RAILWAY-RAIL-JOINT FASTENINGS.

Specification forming part of Letters Patent No. **167,260**, dated August 31, 1875; application filed March 11, 1875.

To all whom it may concern:

Be it known that we, PHINEAS F. KING and EDWIN A. KING, both of St. Louis, county of St. Louis and State of Missouri, have invented an Improved Railway-Joint Fastener, of which the following is a specification:

This invention relates to an improved manner of locking together the adjacent ends of two rails to form the continuity thereof.

Of the drawing, Figure 1 is a perspective view of our improved joint-fastener. Fig. 2 is a side view of the rail ends, showing the slot feature. Fig. 3 is a cross-section. Fig. 4 is a top plan. Fig. 5 is a top view, showing curved shape of fish-bar.

A A′ are the rail ends. We slot each rail end so as to present the oblong slot *a*. (See Fig. 2.) This slot is to receive a bolt, and to form a bearing to support the rail ends in a horizontal plane. B B′ are the fish-bars. These, also, have each a slot corresponding to that in the rail ends. Further, we form the fish-bars to have an elliptic curve. (See Fig. 5.) The object of the slot in the fish-bar is to fasten the same by an inserted bolt. The purpose of the elliptic construction of the fish-bars is to lock the rail ends; also, at same time, to secure and prevent the wedge or fastening device from self-disengagement. C is the bolt, fitted to pass through the slots, and specially to secure the fish-bars. D is the wedge to secure the bolt, and, consequently, secure the complete joint. Therefore, to unite the rail ends, the fish-bars B B′ are placed in position, as ordinary. The bolt C is next passed through the slots, and, lastly, the wedge D is passed through the bolt and fastened, as shown in Figs. 1, 3, 4.

It will be noticed that the tighter the wedge D is fastened, the tighter the elliptic nature of the fish-bars grasp and impinge the rail ends. Further, that the very expansive tendency of the elliptic fish-bars when loosening their hold is utilized as a force to more securely hold fast the wedge D. The fish-bars therefore not only lock the rail ends, but also prevent self-unlocking of the wedge. It is thus impossible for the joint to become unloosened, unless the strain derived from the elliptic fish-bars is overcome. Further, as is apparent, the rail ends have a constant support on the bolt C and slot *a*, and, consequently, the rail ends are permanently kept in the same vertical and horizontal plane.

What we claim is—

The combination of the elliptic fish-bars B B′, the square bolt C, in connection with the slotted rails, and said parts fastened by a fastening device, D, all constructed as herein shown and described, to operate as and for the purpose set forth.

In testimony of said invention we have hereunto set our hands.

PHINEAS F. KING.
EDWIN A. KING.

Witnesses:

WILLIAM W. HERTHEL,
CHAS. F. MEISNER.