(No Model.)

J. S. WARREN.

RAIL JOINT.

No. 322,027. Patented July 14, 1885.

Fig. 1.

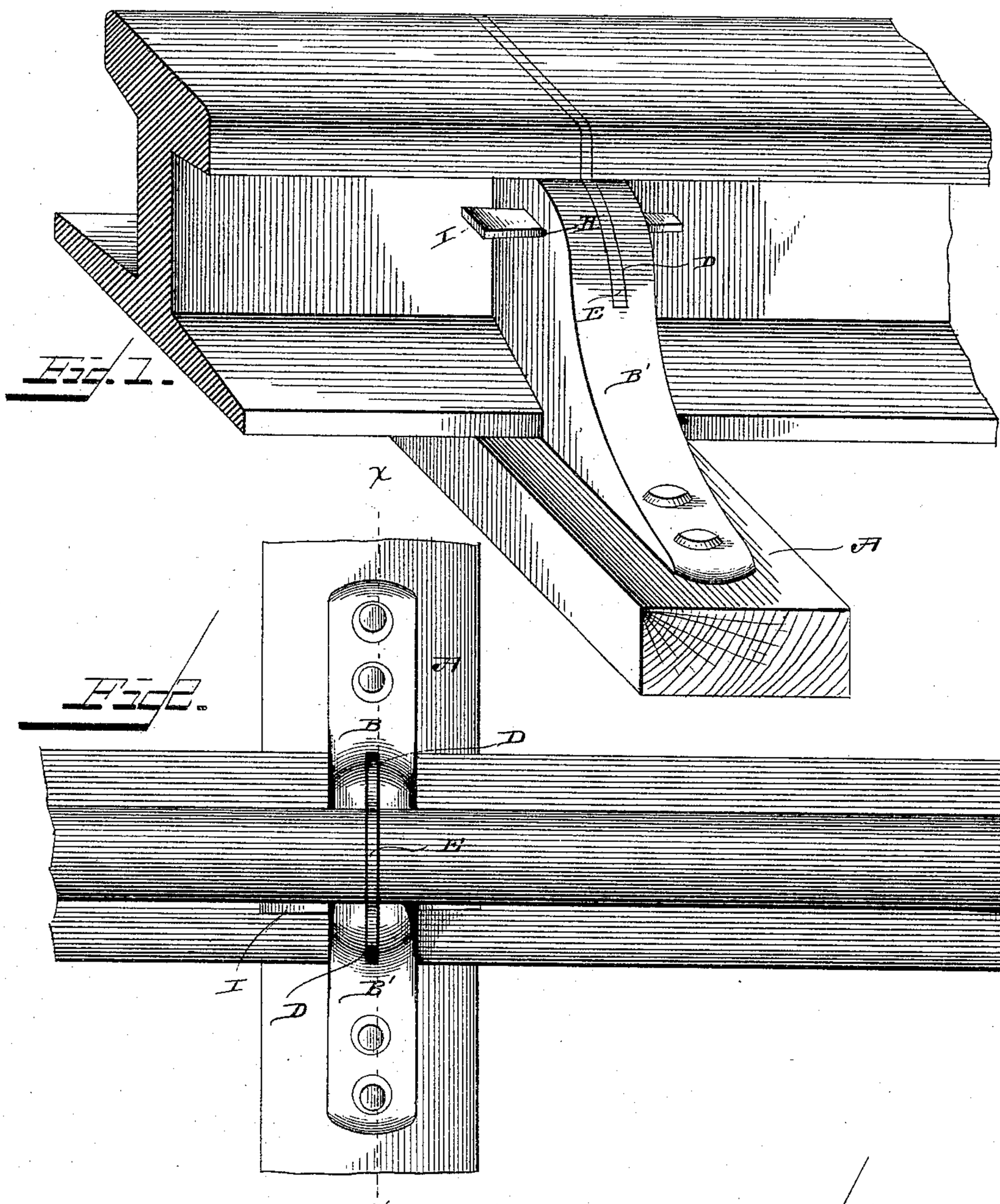
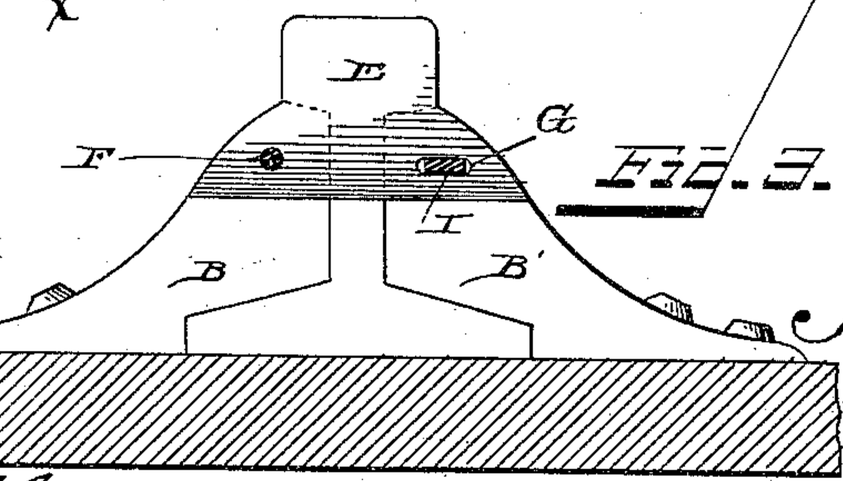


Fig. 2.

Fig. 3.



WITNESSES

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JABEZ SUMNER WARREN, OF BURLINGAME, KANSAS.

RAIL-JOINT.

SPECIFICATION forming part of Letters Patent No. 322,027, dated July 14, 1885.

Application filed May 16, 1885. (No model.)

To all whom it may concern:

Be it known that I, JABEZ S. WARREN, a citizen of the United States, residing at Burlingame, in the county of Osage and State of Kansas, have invented a new and useful Improvement in Rail-Joints, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to an improvement in rail-joints; and it consists in the peculiar construction and combination of devices that will be hereinafter more fully set forth, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a perspective view of a rail-joint embodying my invention. Fig. 2 is a top plan view of the same. Fig. 3 is a vertical transverse section taken on the line *x x* of Fig. 2.

A represents a cross-tie on which are placed the meeting ends of the rails. On the end of the tie, on each side of the ends of the rails, are bolted brackets B B′, which brackets have their faces cut away, as shown in Fig. 3, to enable them to bear against opposite sides of the shanks of the rails and over the lateral extending flanges or bases thereof, and thereby secure the ends of the rails firmly to the cross-tie.

The upper ends of the brackets B B′ are provided with the slots D, and in the bracket B, in its slot D, is secured a metallic plate, E, by means of a pin or bolt, F. The plate E extends between the ends of the rails at the joint thereof, and is so shaped as to conform in size and shape to the heads of the rails, and thereby form an intermediate bearing-plate for the rails, and prevents an open joint being left between the meeting ends, and thus avoids the wear that would otherwise ensue on the ends of the rails owing to the pounding of the wheels of the train thereon.

In the free end of the plate E is made a slot, G, and in the upper end of the bracket B′ is made a transverse slot, H, with which the slot G of the plate E registers.

I represents a wedge-shaped key, which is passed through the slots H and G, and thereby secures the free end of the plate E firmly to the bracket B′. By tightening this wedge in the slots the brackets are caused to bear tightly on opposite sides of the meeting ends of the rails, and thereby prevent the possibility of lateral displacement of the ends of the rails.

It will be readily seen from the foregoing description and the accompanying drawings that it is not necessary to make holes through the shanks of the rails in order to form the joint, as is now necessary with the fish-plate joints in common use. When it become necessary to tighten the joints at any time, it may be easily done by simply driving in the wedge.

Another advantage gained by a rail-joint of this construction is that the rails are enabled to contract and expand under different temperatures without drawing or wearing upon the bolts that are used in the rail-joints now in common use, which frequently results in the rupture of the bolts and the consequent weakening of the joints.

Having thus described my invention, I claim—

1. The combination of the bracket bearing against the meeting ends of the rails on opposite sides thereof, and the plate E, secured in slots in the upper ends of the brackets and bearing between the ends of the rails, the brackets being bolted or otherwise secured to the cross-tie, substantially as described.

2. The combination of the brackets B and B′, bolted or otherwise secured to the cross-tie and bearing against opposite sides of the meeting ends of the rails, the opposing faces of said brackets being cut away and adapted to fit over the bases of the rails and against the shanks thereof, and having central vertical slots, D, in their upper ends, and the plate E, secured to one of the brackets by a bolt or pin, F, a slot, G, made in the opposite end of the plate, a slot, H, in the opposite bracket registering with the slot G, and a wedge-shaped key, I, passing through the slots H and G, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

JABEZ SUMNER WARREN

Witnesses:
B. F. IRVIN,
L. L. WARREN.