J. M. Heard.

Railroad Rail Joint.

No. 30,629. Patented Nov. 13, 1860.

Fig: 1

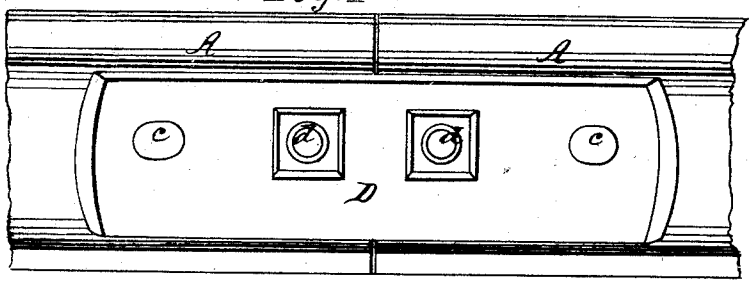


Fig: 3

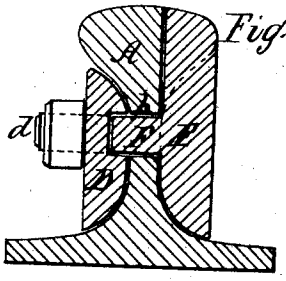


Fig: 2

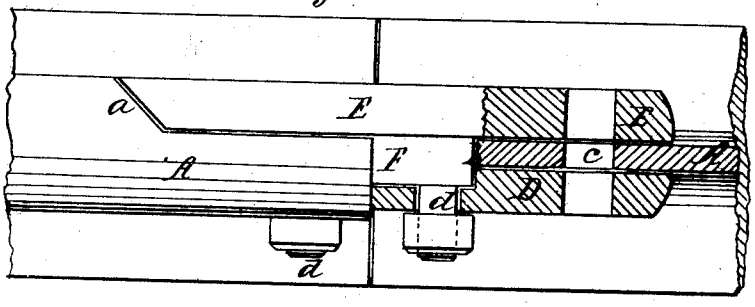
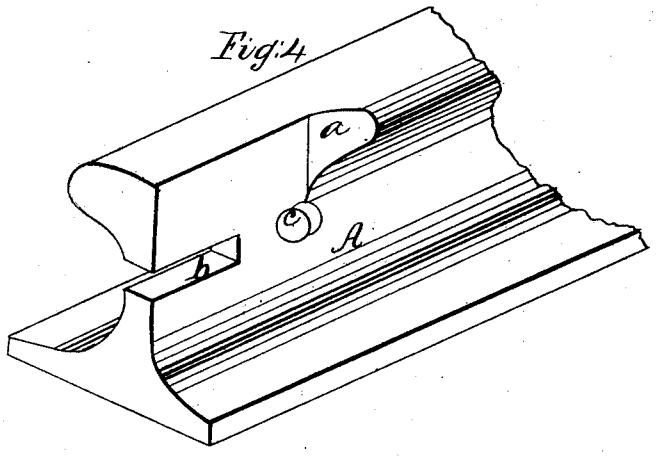


Fig: 4



Witnesses
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UNITED STATES PATENT OFFICE.

JOSEPH M. HEARD, OF PRAIRIE STATION, MISSISSIPPI.

RAILROAD-JOINT.

Specification of Letters Patent No. 30,629, dated November 13, 1860.

To all whom it may concern:

Be it known that I, JOSEPH M. HEARD, of Prairie Station, in the county of Monroe and State of Mississippi, have invented a new and Improved Railroad-Rail Joint; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 represents a side elevation of the improved rail joint. Fig. 2 shows a top view of Fig. 1, with a horizontal section taken through one end of a section of rail. Fig. 3 is a cross section taken through the rail at the joint. Fig. 4 is a perspective view, showing one end of a section of rail.

Similar letters of reference indicate corresponding parts in the several figures.

To enable those skilled in the art to fully understand my invention I will proceed to describe its construction and operation.

In the drawings A, A represents the ends of two sections of the ordinary T-shaped railroad rail. The ends of each section of which are swaged or cut out in the manner represented clearly by Fig. 4, that is to say, the outer lip of the rail table is cut out on a vertical plane with the rail's neck, a suitable distance from each end of the rail section, and then beveled or cut obliquely to the line of the rail forming the shoulder portions *a*. The end of the rail is again cut as represented, forming a slot *b*, into the thin portion or neck of the rail. An elliptical hole *c*, is then punched through the neck of the rail near to the end of the same, as represented in the drawings, Figs. 1, 2, and 3. Each rail end may be thus shaped if it is desirable to secure every joint with my improved fastening but each corresponding rail end should be formed in the manner described and represented by Fig. 4.

D is a piece of metal of a sufficient length to extend some distance on each side of the rail joint, and of a plane convex shape, that is, the outside is plane and the inside corresponds exactly to the shape of the side of the rail, so as to fit the rail between the base portion, and the lip of the table snugly and when put in its proper position to serve as a brace and a nut bar for the bolt nuts.

E is a bar of about the same length as D, which is formed so as to fill up the side of the rail that is cut out as shown in Figs. 2 and 3, and thus give an artificial support for the rolling load, and give strength to the rail neck at the joint, as this piece it will be understood will break joints with the rail joint.

F is a lip that projects from the inside of the piece E, and passes through the two slots in the ends of the rails, when they are brought together, and projects slightly through the opposite side of the rail's neck. Projecting from each end of this piece F, is a screw bolt *d;* these bolts receive nuts *e*, *e*, for locking up the joint. Each end of the piece E, projects under the rail table so as to give support to the table at the beveled ends *a*, *a*. Holes are punched through the piece E, corresponding to those in the rail's neck and the fishing-bar D. This latter bar (D) has a recess cut into its inner surface to receive the projecting portion F, of the bar piece E, and also two round holes to receive the screw bolts *d*, *d*.

From this description it will be seen that with my improved joint the rail ends are rigidly secured against springing in any direction, that the portion E, which serves to strengthen the rail at the joint receives a portion of the rolling load, and transmits it to the base of the rail, and at the same time that the rails can have a free end play, sufficient to provide for the changes of temperature.

I do not claim broadly the notching out of the ends of the rails to receive a supporting bar upon which the wheels of the cars may run when passing the joint, nor do I claim broadly the slotting of the ends of the rails and the insertion of a supporting wedge piece therein, nor do I claim broadly the use of a connecting bar between the head and base of the rails, but

I claim—

The arrangement of the tongue F to pass into a cavity in the bar D so as to be supported thereby, as shown and described, when said tongue is made in one piece with the bar E, and when the rails are notched and slotted and all the parts constructed and combined all as herein set forth and represented.

JOSEPH M. HEARD.

Witnesses:

ALBERT HAMILTON HAYS,

M. L. STRONG.