L. I. BAKER & L. O. ROOT.

Rail-Joint.

No. 205,338. Patented June 25, 1878.

Fig. 1.

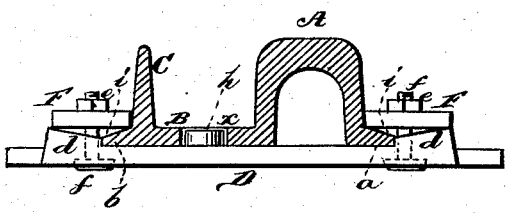
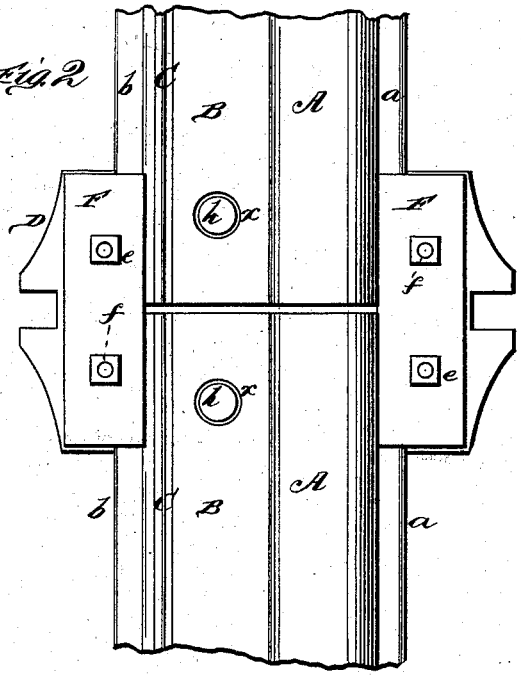


Fig 2



WITNESSES

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UNITED STATES PATENT OFFICE.

LEWIS I. BAKER AND LAWRENCE O. ROOT, OF MINNEAPOLIS, MINNESOTA.

IMPROVEMENT IN RAIL-JOINTS.

Specification forming part of Letters Patent No. **205,338**, dated June 25, 1878; application filed April 27, 1878.

To all whom it may concern:

Be it known that we, LEWIS I. BAKER and LAWRENCE O. ROOT, of Minneapolis, in the county of Hennepin and State of Minnesota, have invented a new and valuable Improvement in Railroad-Rails; and we do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a transverse vertical sectional view of our railroad-rails, and Fig. 2 is a plan view thereof.

This invention has relation to fastenings for railroad-rails; and the novelty consists in the combination of the parts hereinafter more fully set forth, and pointed out in the claim.

The annexed drawing, to which reference is made, fully illustrates our invention.

A A represent the rails, which are rolled in arch form, as shown, of any desired height and width. At the bottom, along the outer side of the rail, is formed a flange, *a*, and along the inner side is formed a horizontal base, B, extending inward for a suitable width. On this base is formed a vertical guard, C, of the same or nearly the same height as the rail. Outside of this guard the base B forms a flange, *b*, similar to the one on the opposite side of the rail. The guard C forms a protection which prevents the wheels from running off the track, and said guard may be formed in one piece with the arched rail, as shown, or it may be attached separately by means of chairs or spikes. The arch form of the rail renders it more durable and more easy to manufacture.

D represents the railroad-chair, formed on its upper face with ribs or flanges *d d*, between which the two rails fit, said rails being held down to the chair by means of plates or straps F F, bolted to said ribs and overlapping the flanges *a b* on the rails.

The upper surfaces of the ribs *d* are inclined downward toward the rail, and the flanges *a b* of the rail are inclined outward, whereby a cavity, *i*, is formed under each plate or strap F, creating a spring which tends to keep the bolts tight after being screwed up.

f f are the bolts, and *e e* the nuts on them. On the upper face of the chair D are two lugs, *h h*, formed therewith, which project through corresponding holes or openings in the bed B of the rails, for the purpose of keeping the track or rails from spreading or pulling apart more than is necessary by the contraction or expansion; but this portion of the device is not new with us.

No claim is made in this application to an arched form of rail, nor to a vertical guard alongside of the rail, as they have been used heretofore.

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

The combination of the chair D, having inclined-faced ribs *d d*, the rail having inclined bottom flanges *a b*, the covering-plates F F, forming cavities *i i* underneath, and the fastening bolts and nuts, substantially as and for the purposes set forth.

In testimony that we claim the above we have hereunto subscribed our names in the presence of two witnesses.

LEWIS I. BAKER,
LAWRENCE O. ROOT.

Witnesses:
R. W. CUMMINGS,
C. B. CHAPMAN.