

G. HERRING.  
Railway-Rails.

No. 146,903.

Patented Jan. 27, 1874.

Fig. 1.

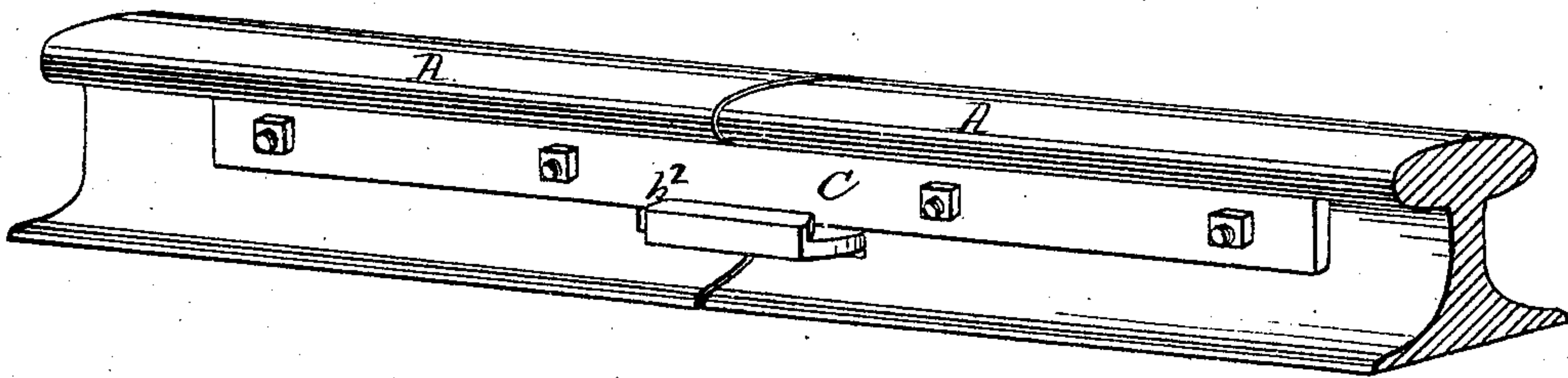


Fig. 2.

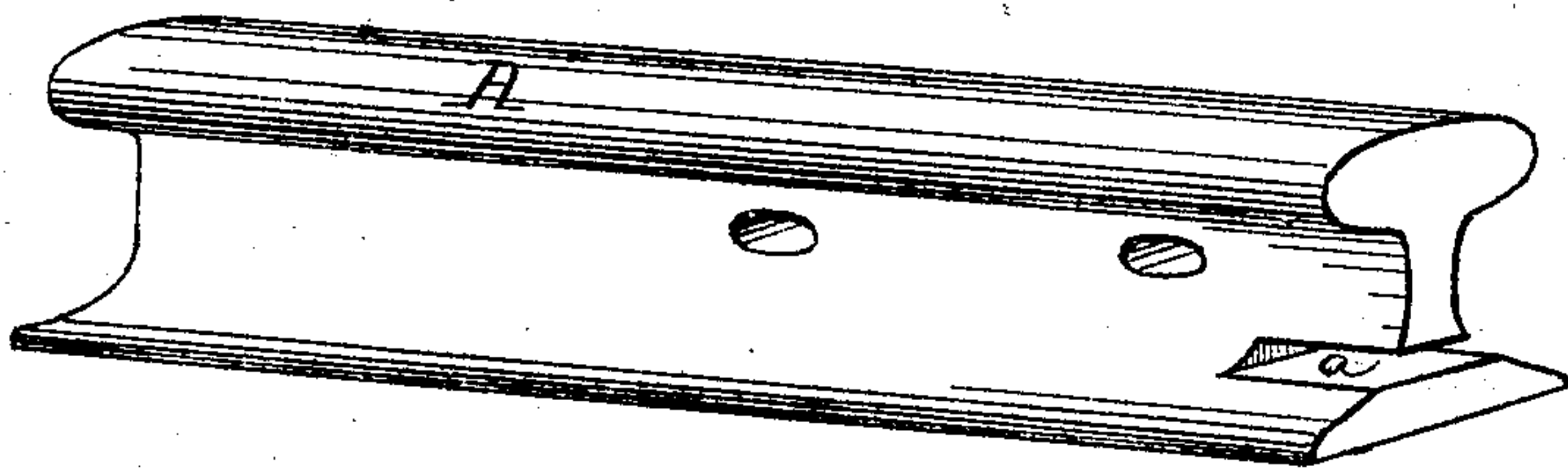


Fig. 3.

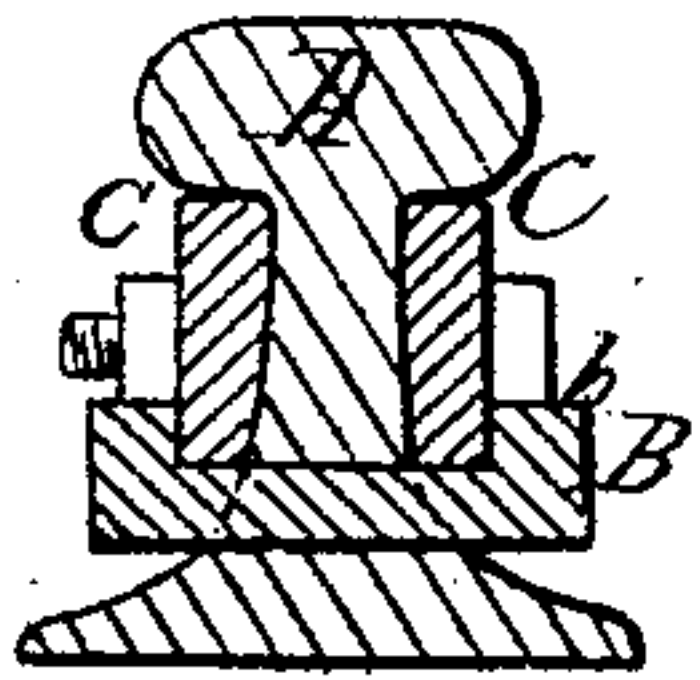
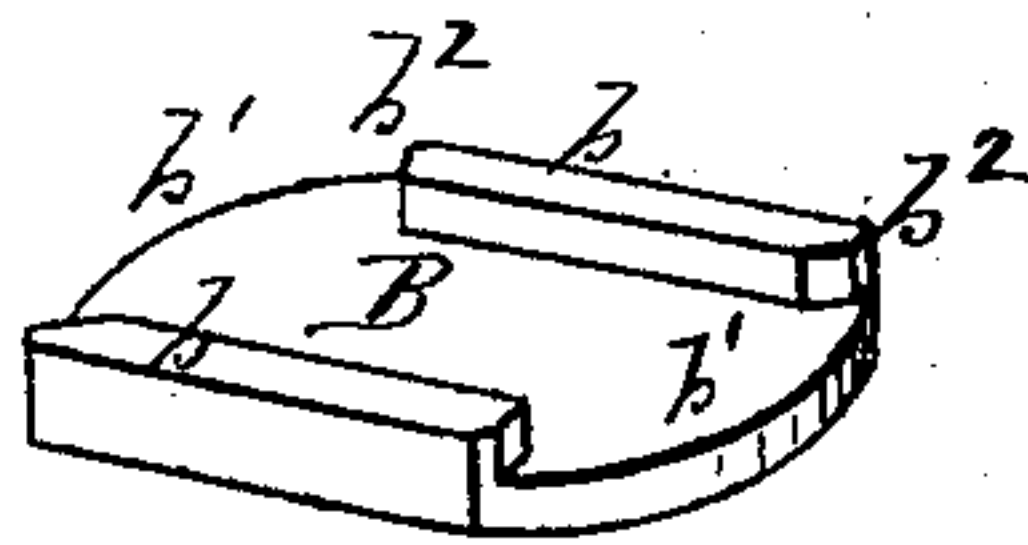


Fig. 4.



Witnesses.  
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# UNITED STATES PATENT OFFICE.

GRANVILLE HERRING, OF DURAND, ILLINOIS.

## IMPROVEMENT IN RAILWAY-RAILS.

Specification forming part of Letters Patent No. **146,903**, dated January 27, 1874; application filed July 19, 1873.

*To all whom it may concern:*

Be it known that I, GRANVILLE HERRING, of Durand, in the county of Winnebago and State of Illinois, have invented a new and useful Improvement in Railway-Rails; and I do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawings and to the letters of reference marked thereon.

Figure 1 is a perspective view of two rails joined together by my improved key. Fig. 2 is a perspective view of a section of rail, showing the slot for the reception of the key. Fig. 3 is a transverse section through the rail-key and fish-plate; and Fig. 4 is a perspective view of the key.

Similar letters of reference denote corresponding parts in all the figures.

The object of the invention is more particularly for locking the joints where the ordinary fish-plates are used, and also to prevent the ends of the rails from becoming bruised or broomed, and to relieve them from the concussion produced by the train. In order to keep the ends of the ordinary rail from being bruised, and to relieve it from the concussion produced, the fish-plate joint is located between the ties, and yields slightly to the weight of the rolling-stock; but it has been found that, even when the fish-plates are bolted tightly to the rails, the joint is not of sufficient strength to prevent the unequal spring and the lateral displacement of the rails. To obviate these objections this invention has been made; and consists in providing the rails at the ends or joints with a ribbed plate or key, fitted into a slot formed partly in each rail, said key being provided upon its upper face, at the sides, with lugs or ears, to assist in locking the fish-plates in position, all as hereinafter described.

The rails A are made in the usual manner, with the exception of the transverse gains a,

as shown, in each end of every rail for the reception of a ribbed plate or key, B, with ears *b b*, between which and the rail the fish-plates C C are inserted, one piece for each joint, which securely unites the joint, strengthening the same, and preventing the lateral displacement of either of the rails, as well as keeping the faces of the rails even at the joints, as one rail cannot spring or sag beneath the other, even if the bolts passing through the fish-plates and rail should be entirely removed. The key is rounded at its end, as shown at *b<sup>1</sup>*; the ears or lugs extend to the edge of the curve, and are beveled inward from the point where they intersect the curve, as shown at *b<sup>2</sup>*.

By turning the key so that the face of the bevel will be on a line with the transverse face of the rail, a new rail may be substituted and the key and rail driven together into line with the other rails without loosening or interfering in any way with the adjoining rails.

The fish-plates are inserted between the sides of the rails and the ears on the key, and driven endwise to their true position.

The rails are provided with the usual elongated bolt-holes, to allow for expansion and contraction, but this does not in any way affect the lock.

Having now described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The key B, provided with the lugs or ears *b b*, in combination with the slotted ends of the rails A and fish-plates C C, substantially as and for the purpose described.

This specification signed and witnessed this 23d day of June, 1873.

GRANVILLE HERRING.

Witnesses:

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