

W. E. Winby,

Railway Rail.

No. 112,998.

Patented Mar. 21. 1871.

FIG-1

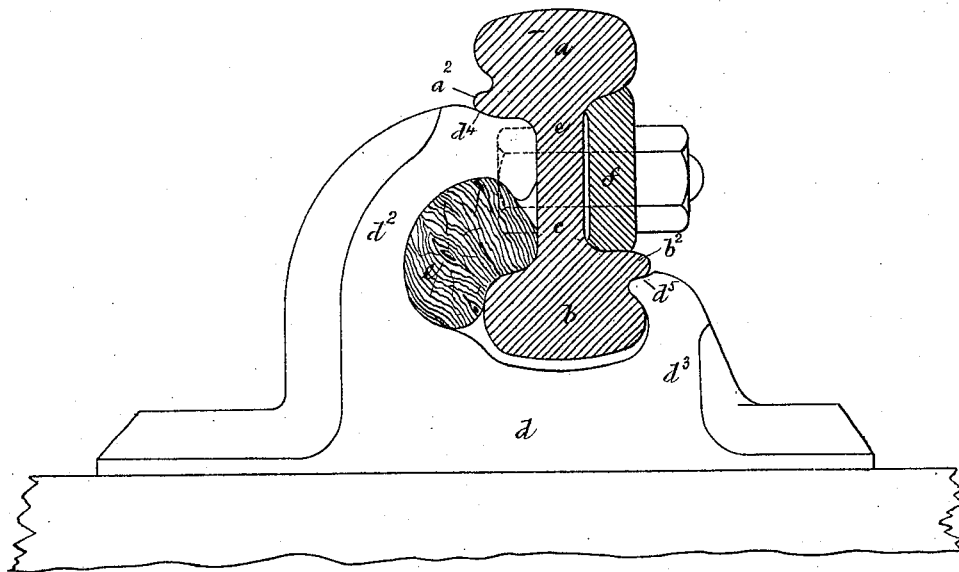
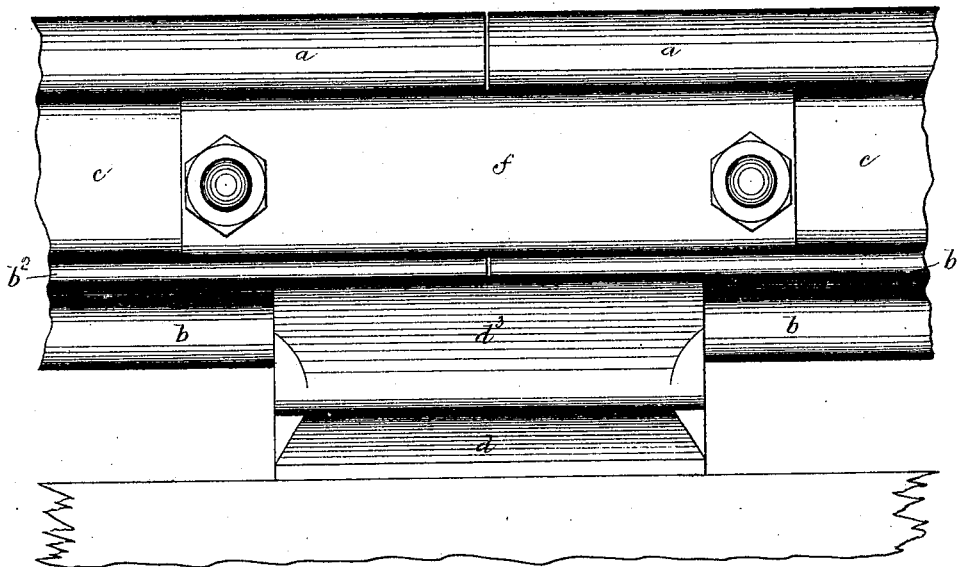


FIG-2



Witnesses
George Shaw
Richard Skerrett

Inventor
William Edward Winby

W. E. Winby,

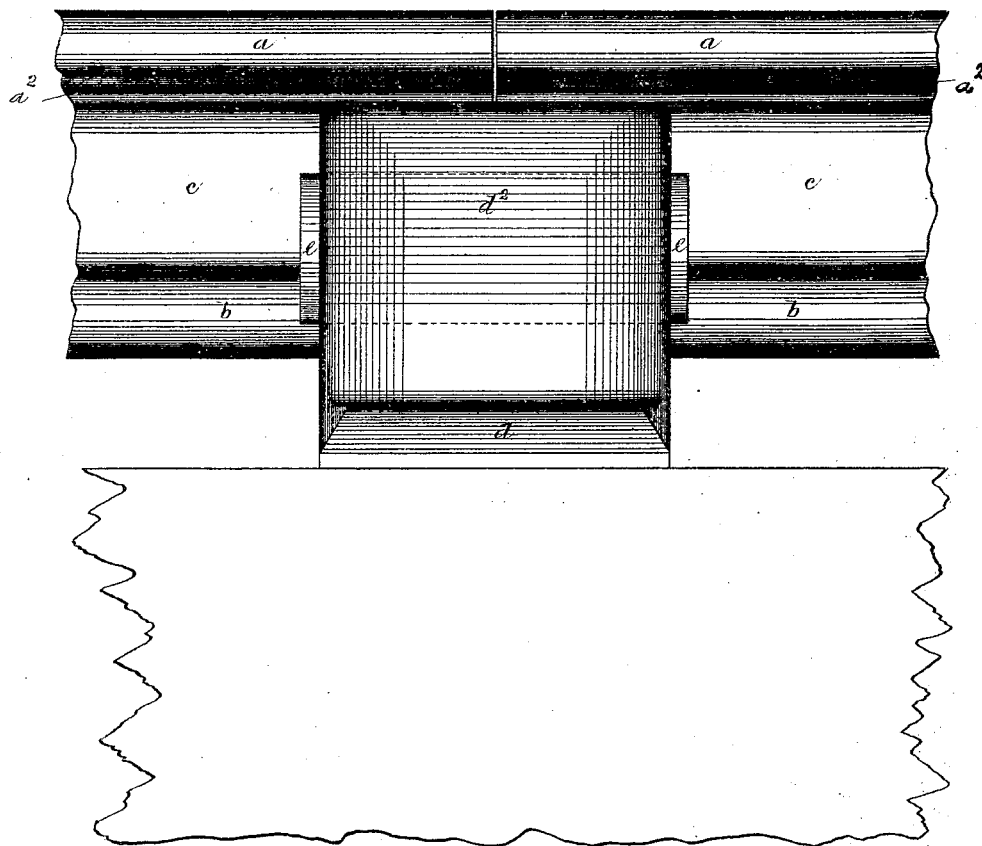
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FIG. III



Inventor

William Edward Winby

Witnesses.
George Shaw
Richard Skerrett.

UNITED STATES PATENT OFFICE.

WILLIAM EDWARD WINBY, OF EDGBASTON, ENGLAND.

IMPROVEMENT IN RAILWAY RAILS AND CHAIRS.

Specification forming part of Letters Patent No. 112,998, dated March 21, 1871.

To all whom it may concern:

Be it known that I, WILLIAM EDWARD WINBY, of Edgbaston, in the county of Warwick, England, civil engineer, a subject of the Queen of Great Britain, have invented or discovered new and useful Improvements in Rails and Chairs for Railways and Tramways; and I, the said WILLIAM EDWARD WINBY, do hereby declare the nature of the said invention, and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement thereof—that is to say:

My invention consists in rolling a lip or rib on one side of each head of the rail, the said lip or rib being situated underneath the head and at or near the junction of the head of the rail with the body. The said lip or rib is slightly inclined upward—that is, from the body toward the head of the rail. The chair is formed so as to furnish two bearings to the said lips or ribs of the rail, one of the said lips or ribs bearing on a concave depression on the body of the upper jaw of the chair and the other lip or rib taking a bearing on the top of the lower jaw of the chair. The rail is fixed in its place in the chair by means of a wood key. The said key does not take the usual lateral bearing, but bears against the under side of the upper jaw of the chair and against the inverted head of the rail. By this method of fixing the rail the working-surface of the inverted head of the rail is preserved from wear, so that when the rail is reversed the acting surface of the rail presents a clear uninjured surface.

My invention does not materially interfere with the usual mode of fishing the joints of the rails, excepting that the holes required to be punched in the fish-plate are situated a little out of the middle line of the plate.

The chair described may be used as a joint-chair, in which case the fishing of the joints of the rails is effected by strong fish-plates secured by bolts to the inner sides of the ends of the rails.

Having explained the nature of my invention, I will proceed to describe, with reference to the accompanying drawings, the manner in which the same is to be performed.

Figure 1 represents in cross-section a rail constructed according to my invention. Fig. 2 is an inside elevation of the same; and Fig. 3,

an outside elevation of the same, the said rail being combined with a chair, also constructed according to my invention.

In Fig. 1 the chair is represented in end elevation, the section of the rail being taken at the joint.

The chair is represented in the drawings as being used as a joint-chair; but the said chair is also used for supporting the rails at other parts besides the joints.

The same letters of reference indicate the same parts in the several figures of the drawings.

a b are the heads of the rail, and a^2 b^2 are the longitudinal lips or ribs rolled on one side of each of the said heads. Each lip or rib a^2 b^2 is slightly inclined upward, as represented, and is situated underneath the head and at or near the junction of the head with the body c .

d is the chair, and d^1 d^2 are the jaws of the same. Each of the jaws d^1 d^2 of the said chair is furnished with a bearing, (marked, respectively, d^3 d^4 .) The upper bearing, d^3 , is concave, and upon the said concave bearing the lip or rib a^2 of the head a bears. The lower bearing, d^4 , is a little convex, and the lip or rib b^2 of the other head, b , takes its seat upon the top of the said bearing d^4 .

e is the wood key by which the rail is fixed. The said key bears against the under side of the upper jaw, d^1 , of the chair d and against the inverted head b of the rail. The manner in which the rail is fixed in the chair by the key e and supported by the lips or ribs a^2 b^2 seating themselves upon the bearings d^3 d^4 of the chair, so as to preserve the inverted head of the rail from contact with the chair and consequent wear, will be readily understood by an examination of Fig. 1. The inverted head of the rail so supported, when reversed in the chair, presents a clear uninjured surface. The fish-plate f , for joining the ends of the rails, is situated inside thereof, and is fixed by bolts in the ordinary way, the holes in the said fish-plate for receiving the fastening-bolts being punched a little out of the middle line of the plate, as represented in the drawings.

I do not limit myself to the shape of the lips or ribs a^2 b^2 of the rail, nor to the strength of the said lips or ribs.

Having now described the nature of my invention and the manner in which the same is

to be performed, I wish it to be understood that I do not limit myself to the precise details herein described and represented, as the same may be varied without departing from the nature of my invention; but

I claim as my invention—

1. The improvements in rails for railways and tramways, hereinbefore described, and illustrated in the accompanying drawings—that is to say, rolling a longitudinal lip or rib on one side of each head of the rail for the purpose of supporting the said rail in its chairs and preserving from wear the working-surface of the inverted head of the said rail, substantially as described and illustrated.

2. The improvements in chairs for railways and tramways, hereinbefore described, and illustrated in the accompanying drawings—that is to say, making the jaws of the said chairs with two bearings for seating the lips or ribs of the rail hereinbefore described, and also making the upper jaw to receive the fastening-key, by which the rail is fixed in the chair, substantially as described and illustrated.

WILLIAM EDWARD WINBY. [L. S.]

Witnesses:

GEORGE SHAW,

RICHARD SKERRATT,

7 Cannon Street, Birmingham.