

J. W. CLOSE.
Braces for Railway-Frogs.

No. 155,495.

Patented Sept. 29, 1874.

Fig. 1.

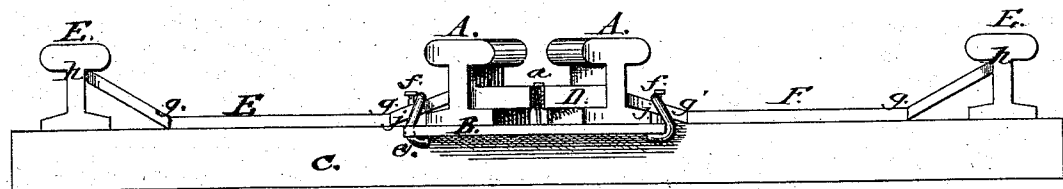
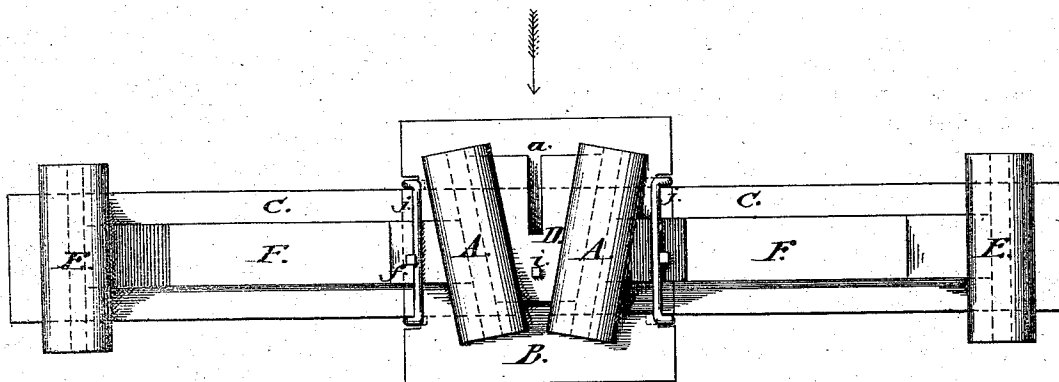


Fig. 2.



Witnesses:
Harriet
John D. Patten

Inventor:
John W. Close
By William H. Quinn
his atty

UNITED STATES PATENT OFFICE.

JOHN W. CLOSE, OF BUFFALO, NEW YORK, ASSIGNOR OF ONE-HALF HIS
RIGHT TO CHARLES B. SMITH, OF SAME PLACE.

IMPROVEMENT IN BRACES FOR RAILWAY-FROGS.

Specification forming part of Letters Patent No. **155,495**, dated September 29, 1874; application filed
March 6, 1874.

To all whom it may concern:

Be it known that I, JOHN W. CLOSE, of the city of Buffalo, in the county of Erie and State of New York, have invented certain new and useful Improvements in Guard and Wing-Rail Braces; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

The object of my invention is to furnish a device for strengthening and bracing the guard-rails of railway-frogs, by means of which they are held securely in their places, and enabled to withstand the shocks to which they are subjected by the wheels of passing trains.

The invention consists of a brace of wrought-iron, placed on top of the ties, extending from the wing-rails to the guard-rails of the frog. The ends of this brace are turned upward, one pressing against the web of the wing-rails, and the other supporting the guard-rails on the side opposite to that which is subject to the impingement of the wheels of the cars.

The end of the brace, which abuts against the wing-rails, is designed to serve as a flange to secure the rails to the chair, thereby dispensing with flanged chairs, and substituting a flat piece of iron for the same purpose.

Figure 1 is an elevation of the braces, showing their position with respect to the guard and wing rails of the frog. Fig. 2 is a plan of the same.

A A are the wing-rails of a railway-frog, sitting on the flat chair B, placed upon the tie C. Between the rails the wedge-shaped block D is placed. This block is provided with the deep slot *a* in the forward end, into which the frog-point is entered. Its position is on the inner flanges of the wing-rails, with its sides pressing closely against the inner sides of the webs thereof, as shown clearly in Fig. 1. *i* is a bolt passing vertically through wedge D and chair B, through the medium of

which rails A A are clamped firmly between the wedge-shaped block and the chair.

In the drawing but one bolt is represented, though others may be used if it should be thought necessary.

E E are the guard-rails of the frog. They are fastened to the ties by spikes in the usual manner.

When thus secured, without other help, these rails are unable to withstand the enormous pressure or strain which is put on them by trains passing over the track. As a consequence, they are frequently broken from the ties, thereby causing serious accidents. My invention is intended to prevent this occurrence, which it does by giving the assistance of a brace to the ordinary fastenings.

F F are the guard-rail braces, consisting of the broad flat pieces of wrought-iron, extending lengthwise with the tie, to which they are spiked, from the wing to the guard-rails. The ends of the braces are turned upward at obtuse angles, the outer ends *g g* pressing against and supporting the guard-rails at the junction of their heads and webs, as at *h h*, and their inner ends laying over the outer flanges of the wing-rails, and abutting against the webs thereof. J J are clamps placed over the braces to confine the bent ends *g' g'* against the flanges of rails A A. The clamps are kept in their places by being hooked under chair B, as at *e e*, and by spikes *f f* driven into the ties.

By this arrangement the ends *g' g'* are made to serve the purpose of flanges to the chair B, thereby keeping the wing-rails securely in their places, and enabling the use of a plain flat chair without flanges, and at the same time not lessening the usefulness and safety of the frog.

The ends *g' g'*, in connection with the clamps, exert a downward and lateral pressure against the wing-rails, and thus prevent them from spreading, rising upward, or being twisted from their position on the chair.

The block D keeps the rails at the proper distance apart, and aids the brace in securing them to the chair.

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

The braces F F, in combination with the wing-rails A A, wedge-block D, and guard-rails E E, substantially as and for the purpose hereinbefore described and set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 17th day of February, 1874.

JOHN W. CLOSE.

Witnesses:

WILTON C. DONN,

JOS. T. K. PLANT.