

(No Model.)

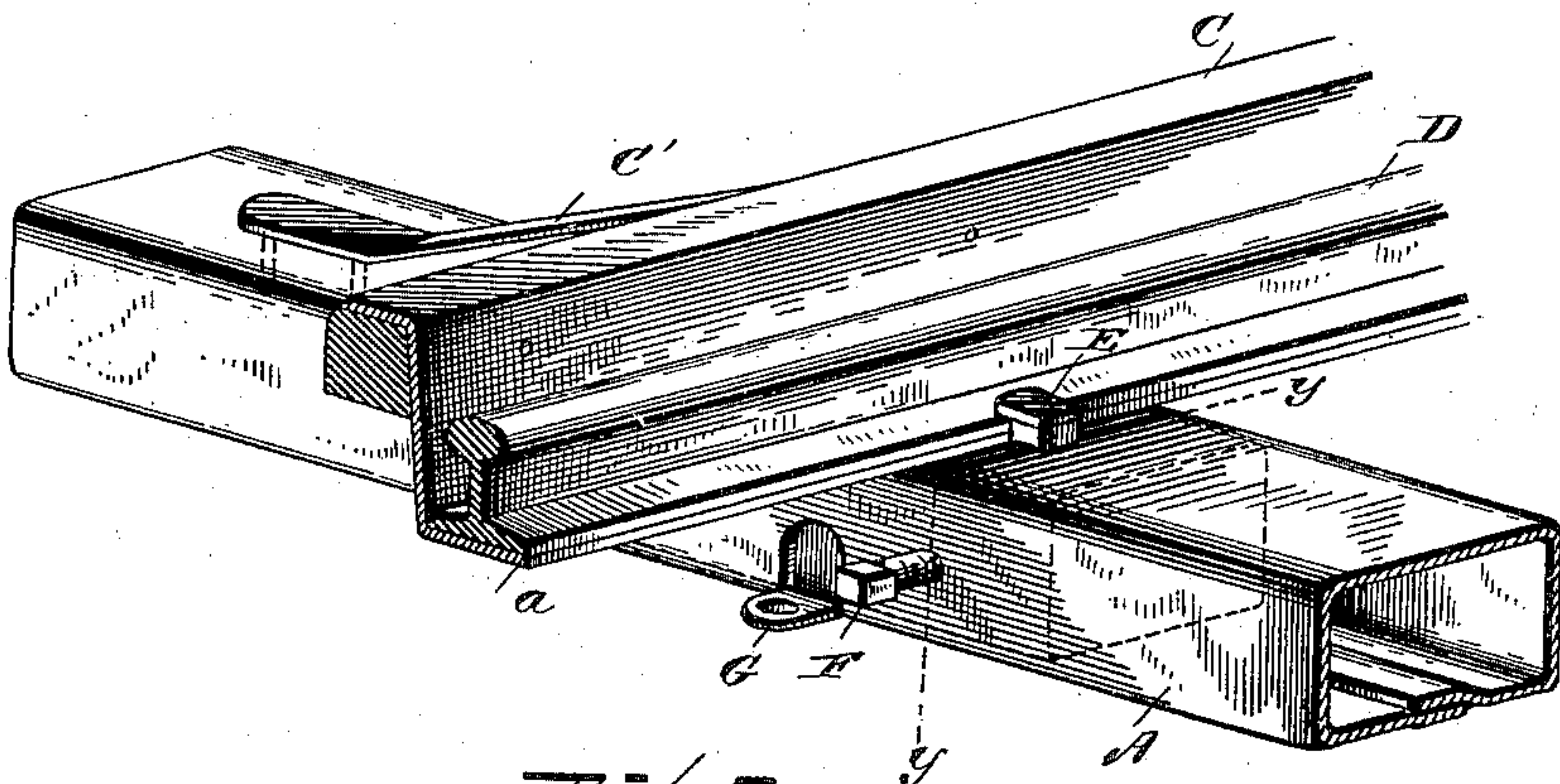
E. P. J. FREEMAN.

RAILWAY TIE AND MEANS FOR SECURING GUARDS AND RAILS TO  
THE SAME.

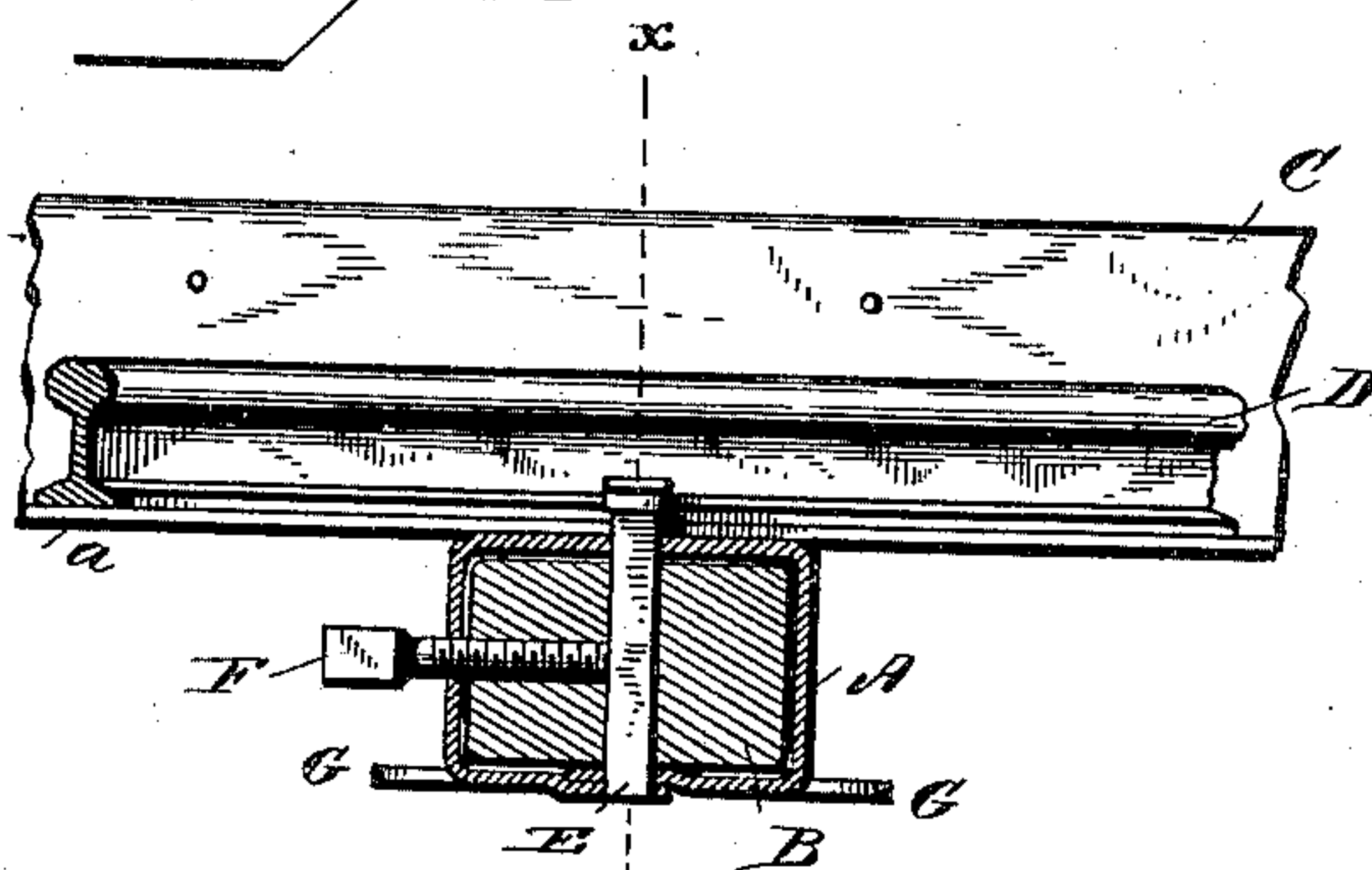
No. 335,804.

Patented Feb. 9, 1886.

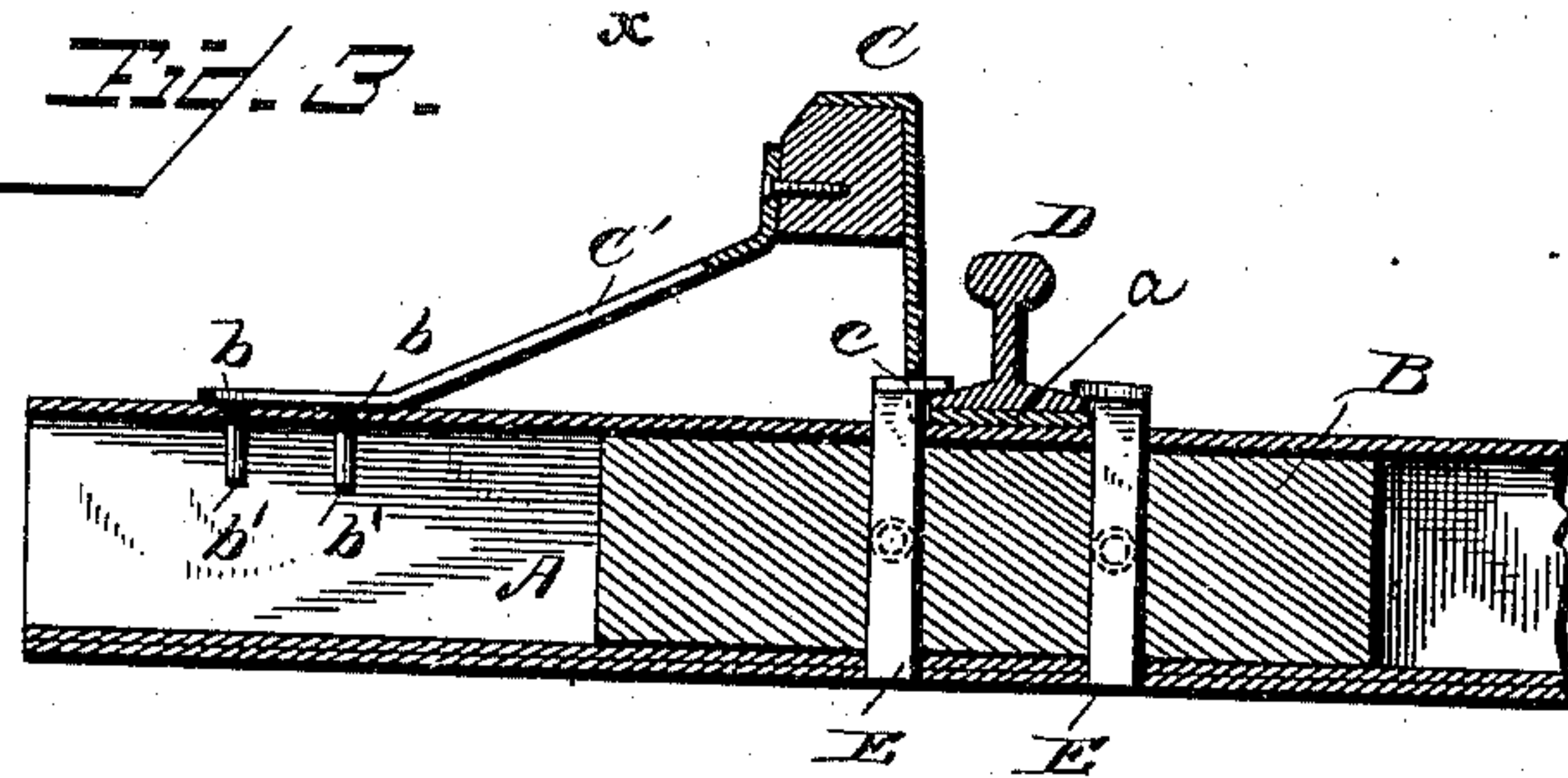
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



Witnesses

*Alfred T. Gage*

Inventor  
*Edwin P. J. Freeman*  
By his Attorney  
*Franklin H. Hough*



# UNITED STATES PATENT OFFICE.

EDWIN P. J. FREEMAN, OF ROSLYN, NEW YORK.

RAILWAY-TIE AND MEANS FOR SECURING GUARDS AND RAILS TO THE SAME.

SPECIFICATION forming part of Letters Patent No. 335,804, dated February 9, 1886.

Application filed November 18, 1885. Serial No. 183,200. (No model.)

*To all whom it may concern:*

Be it known that I, EDWIN P. J. FREEMAN, a citizen of the United States, residing at Roslyn, in the county of Queens and State of New York, have invented certain new and useful Improvements in Railway-Ties and Means of Securing Guards and Rails to the Same; 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 appertains to make and use the same, reference being had to the accompanying drawings and letters of reference marked thereon, which form a part of this specification.

Like letters refer to similar parts throughout the several views.

My invention relates to metallic railway-ties, and the means of securing guards and rails thereto; and to this end it consists in the novel features of construction and combination of parts hereinafter described, and specifically pointed out in the claims.

In the accompanying drawings, Figure 1 is a perspective view of a railway-tie with guard and rail attached in accordance with my invention. Fig. 2 is a cross-section taken on the line *yy* of Fig. 1. Fig. 3 is a vertical longitudinal section on line *xx* of Fig. 2.

A represents a metallic tie, made, preferably, of a single sheet of iron bent so as to form a hollow case, the adjacent edges overlapping upon the under side of the tie. The ends of the case or tie are left open to admit of the insertion of the block B, which is placed within the tie and directly beneath the rail.

C is a guard formed with a flange, *a*, adapted to receive and support the rail, and a brace-arm, *C'*, provided with projections *b' b'*, formed integral therewith or secured thereto, as preferred, and adapted to engage the openings *b* in the tie and serve to prevent lateral displacement of the guard. The guard is also provided with an opening or aperture, *c*, near its longitudinal center, as shown, and through this opening the head of the spike or bolt E passes and embraces the flange of the rail upon the inner side of the guard.

The square-sided bolts E E are passed vertically through apertures in the tie provided

for their reception upon either side of the rail, and are extended through the block upon the interior of the tie, and are held securely in place by means of set-screws F, which are passed horizontally through holes provided in the side of the tie and block in such a manner as to cause the end of the screw to bear against the side of the spike.

The head of the spike or bolt upon the inner side of the rail, engaging with the flange of the rail, serves to hold the same securely in place upon the flange *a* of the guard, and both guard and rail are drawn firmly down upon the tie.

It will be at once evident that the means described presents a simple and secure means of securing the guard and rail to a metallic tie, while the construction is such as to permit of the parts being readily and easily detached by simply loosening the set-screws F.

If the tie is to be used upon an elevated road, or if it is for any reason considered desirable to secure the same so as to prevent the possibility of its becoming laterally displaced, ears may be provided, as shown at G, by cutting a portion of the side of the case or tie and bending the same downward, as shown. Through holes punched in these ears bolts or spikes may be passed and extended into the timbers or bed-plate upon which the tie is to be secured.

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

1. The combination, with a railway-tie and a rail, of a spike passed vertically into said tie, and a set-screw inserted in said tie at right angles to said spike, and bearing against the side thereof, substantially as and for the purpose specified.

2. The combination, with a railway-tie, a rail, and a block within said tie beneath the rail, of a spike or bolt passing through said tie and block, and a set-screw passed into said tie and block at substantially right angles to said spike, and bearing against the side thereof, substantially as and for the purpose specified.

3. The combination, with the tie having openings *b b*, a guard having brace-arm

provided with projections adapted to engage  
said holes, and a central aperture, *c*, and flange,  
as shown, of a rail resting on said flange, and  
a bolt or spike passed into said tie, with its  
5 head projecting through the aperture in the  
guard, and bearing against its flange and that  
of the rail, substantially as described.

In testimony whereof I affix my signature in  
presence of two witnesses.

EDWIN P. J. FREEMAN.

Witnesses:

JOSEPH H. BOGART,  
WILLIAM H. WOOD.