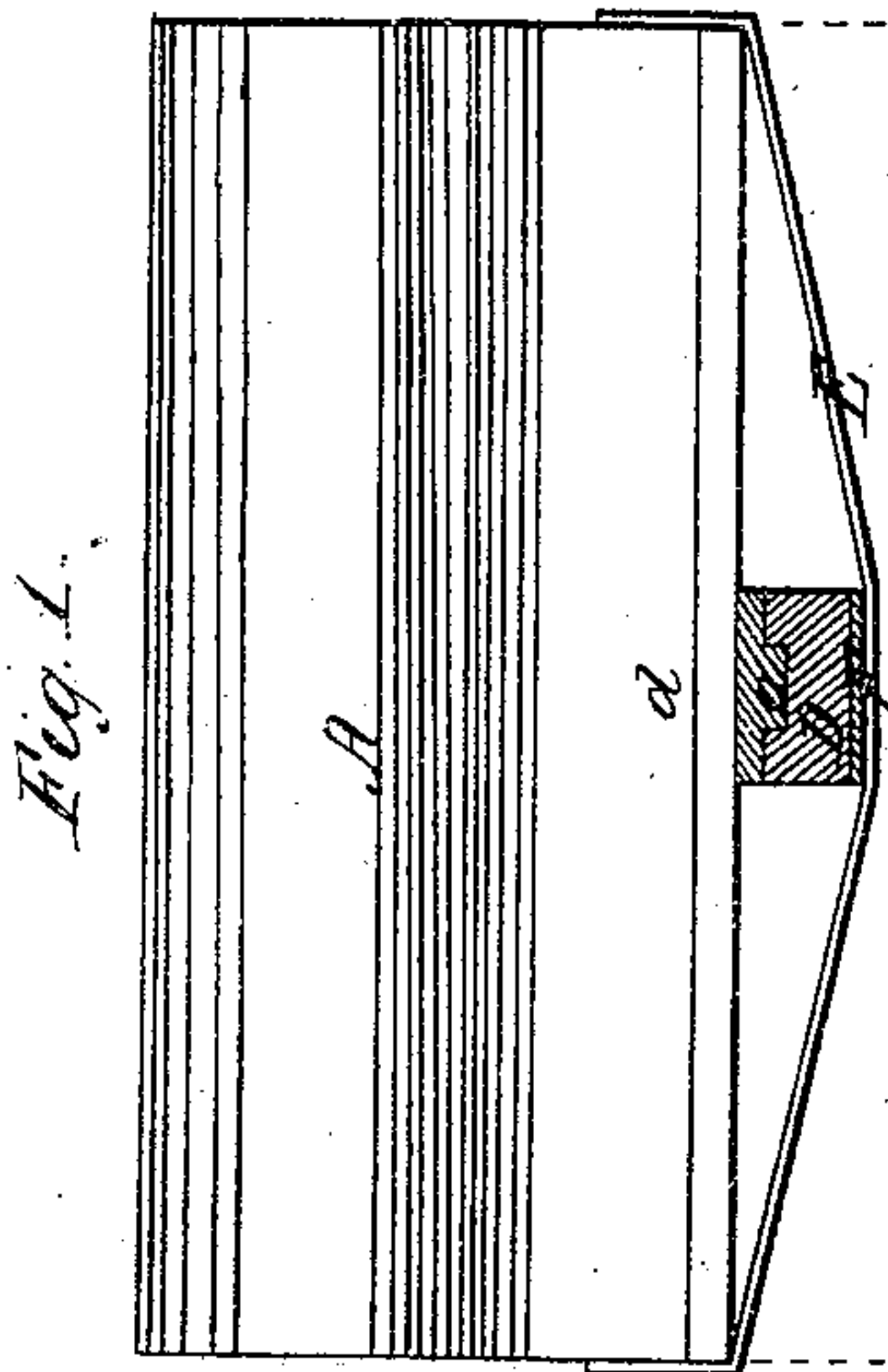
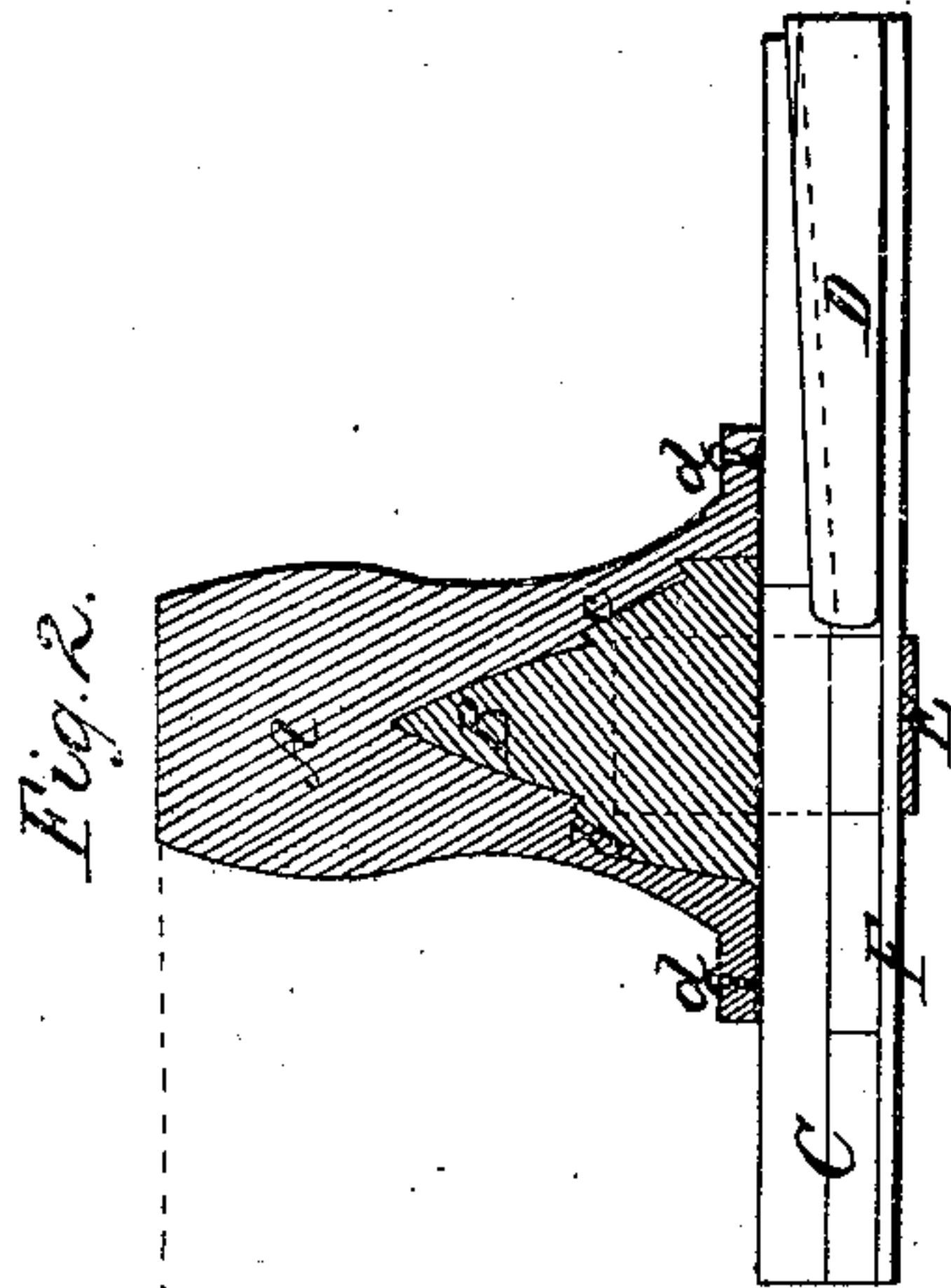


*J. Young.*

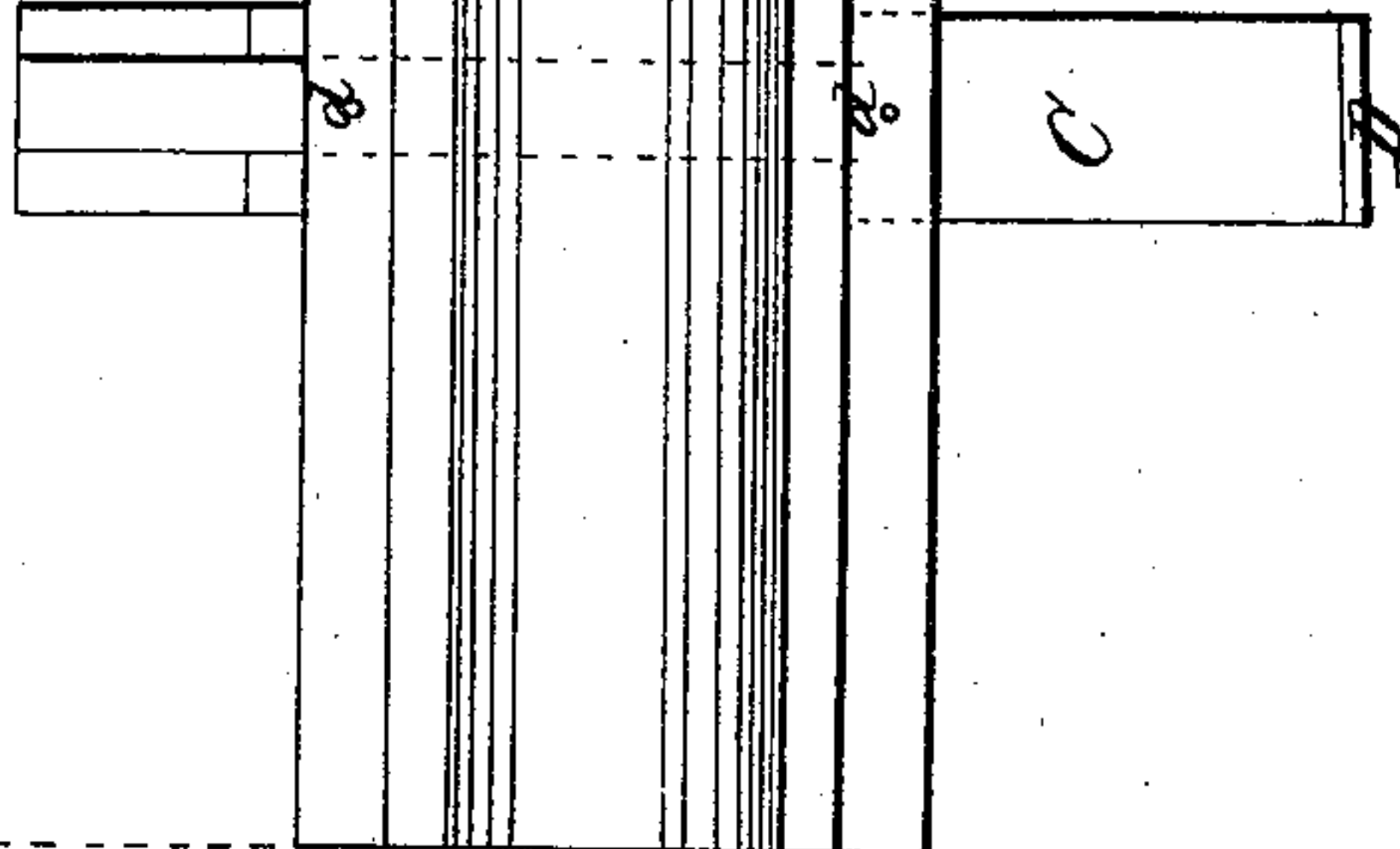
*Railroad Rail.*

*N<sup>o</sup> 23,804.*

*Patented Apr. 26, 1859.*



*Fig. 3.*



*Witnesses;*  
*James Young*  
*William Lucas*

*Inventor;*  
*John M. Young*

# UNITED STATES PATENT OFFICE.

JOHN YOUNG, OF WEST GALWAY, NEW YORK.

## CONSTRUCTION OF RAILROADS.

Specification of Letters Patent No. 23,804, dated April 26, 1859.

*To all whom it may concern:*

Be it known that I, JOHN YOUNG, of West Galway, Fulton County, State of New York, have invented a new and Improved  
5 Method of Constructing Railways; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings, figures, and letters of reference thereon,  
10 making part this specification.

Of the said drawings Figure 1 denotes a side elevation of my improvement. Fig. 2 is a vertical transverse section. Fig. 3 is a top view.

15 Similar letters of reference indicate like parts in all the drawings.

Heretofore in the ordinary construction of railways, the joints or ends of the rails would settle and become uneven and out of  
20 plane with the other portions of the rail, and thereby cause the said ends to split, and spread by the constant percussion of the wheels, thus often involving the necessity of taking up the rails and welding new ends  
25 thereon.

The nature and object of my invention is to obviate this difficulty, by so arranging and combining a rail with a supporting saddle at the ends or joints thereof as to pre-  
30 vent spreading or sagging of the rails and ties, and thereby render this portion of the structure permanent and solid, as will be more fully hereinafter set forth.

To enable others skilled in the art to make  
35 and use my invention I will proceed to describe its construction and operation.

A represents the rail secured to the tie C at *d d*; B, the supporting saddle; C, the tie.

40 D is a grooved, wedge shaped key as seen in Fig. 2.

E is an arched plate secured at the ends of the supporting saddle, and passes under the tie C', as seen in Figs. 1 and 2, to prevent the tie from sagging or rocking, and  
45 may be strained at either end of the supporting saddle with an iron key or nut.

F is a plate or strap of iron secure to the tie at one end, the other being left loose and between which and the tie the key D is  
50 driven, and may be driven at any time when necessary to raise the ends or joints of rails when they become sagged. This key D is grooved while the tie is provided with a flange or tongue which fits the grooved key  
55 and guides it as it is driven (see *a'* Fig. 1) to strain the saddle and tie to prevent sagging.

Upon the saddle there are V shaped grooves (*b c*) as shown in Fig. 2, which form projections, while in the rail there are cor-  
60 responding grooves and projections, so that when the rail is placed on the saddle it will fit snugly not only the large V groove in the rail but also the grooves (*b c*) on the sides of the saddle, and thereby securely locking the  
65 rail and saddle together while the cars are passing over them.

It will be obvious to any mechanic that by my method of construction the rails cannot be made to spread, or crush out, unless both  
70 rail and saddle are crushed together, which in the ordinary wear and tear of a road can never take place. It will also be seen that by straining the tie and saddle together there can be but little if any sagging down.  
75 By my method of construction the tie under the center of the supporting saddle, and over which are the ends or joints of rails, may rest entirely on the arch plate E as seen in  
80 Figs. 1 and 2, having the earth cleared away from the tie to prevent the frost from moving the tie out of place, leaving it suspended on the arch plate E, which will further assist in preserving the ends or joints of rails.

My purpose is to obviate as far as possible  
85 the sagging or battering down and splitting of the ends of the rails, by placing the saddle as described for any required distance at the joints or ends of the rails and straining the tie and saddle so as to make this part of the  
90 structure permanent and solid. A short saddle bearing may be placed inside the rail over every tie.

I would remark that I do not claim placing a rail upon a saddle, as the device is well  
95 known, many examples of which may be referred to; and I therefore disclaim such combination other than my own. But,

I claim—

1. Constructing a rail and saddle as de-  
100 scribed, whereby I am enabled to securely hold, and render solid the joints, or ends of rails during the passage of cars substantially as described.

2. I also claim combining with said rail  
105 and saddle as described, the straining arch E key D, and strip F for the purpose set forth and specified.

JOHN YOUNG. [L. s.]

Witnesses:

WILLIAM BENS,  
JAMES YOUNG.