H. H. May.

Railroad Track.

No. 7,799. Patented Nov. 26, 1850.

Fig. 1.

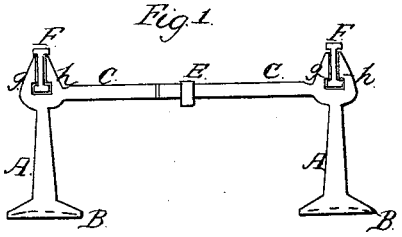


Fig. 2.

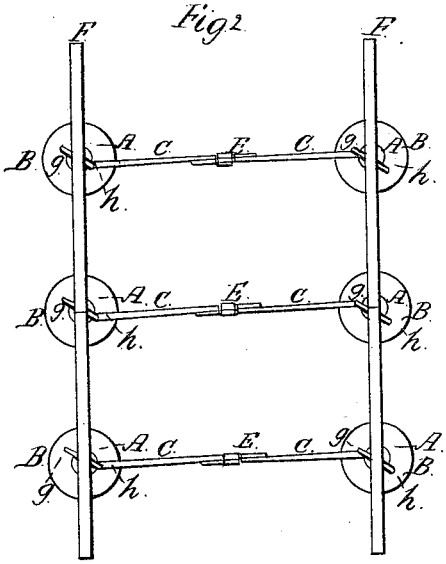


Fig. 3.

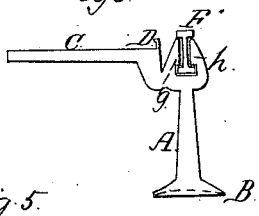


Fig. 5.

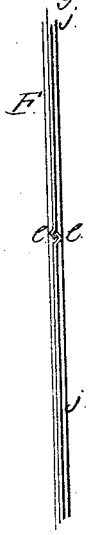


Fig. 4.

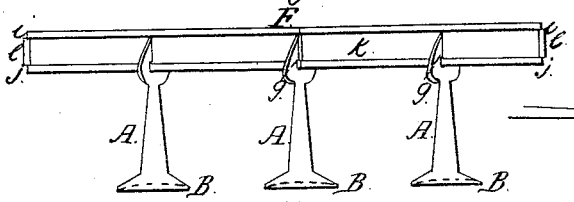
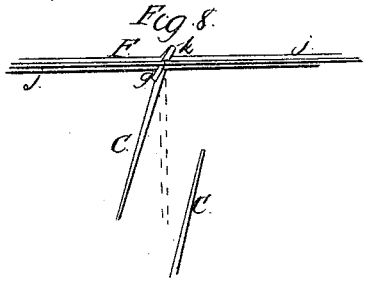


Fig. 6.

Fig. 7.

Fig. 8.



UNITED STATES PATENT OFFICE.

H. H. MAY, OF GALESBURG, ILLINOIS.

IMPROVED METHOD OF SECURING RAILS OF RAILROADS.

Specification forming part of Letters Patent No. **7,799**, dated November 26, 1850.

To all whom it may concern:

Be it known that I, H. H. MAY, of Galesburg, in the county of Knox and State of Illinois, have invented a new and Improved Foundation for Railroads; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is an end view in elevation. Fig. 2 is a top or bird's-eye view. Fig. 3 is a view of a pillar and arm as constructed when the rails pass over a highway. Fig. 4 is a side elevation. Fig. 5 is a top or bird's-eye view of a rail with the upper flange removed for the purpose of showing the manner of locking the rails. Fig. 6 is a view of the clasp or saddle by which the arms are secured together. Fig. 7 is a view of part of the arms, showing the tenons and socket and the recess for the clasp or socket by which they are secured. Fig. 8 is a top view of the rail with the upper flange removed, showing the horns and the position of the arms before they are pressed together and secured by the clasp or saddle.

Similar letters of reference indicate corresponding parts in each of the several drawings.

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

A A A, Figs. 1, 3, and 4, are pillars of conical shape and having suitable bases B, the bottoms of which are made slightly concave, as seen by the dotted lines. These bases are also made as light as may be and at the same time sufficiently strong to sustain the weight intended for them to bear. The pillars A A A must be of sufficient length to allow the bases B B B to be far enough below the surface of the earth to avoid the action of the frost.

C C C are arms extending from the heads of the pillars to more than half the distance to the opposite pillars. They may be fluted, so as to reduce their weight and retain strength. They are to proceed from the head of the pillars sufficiently far below the upper surface of the rails to admit of a flange on the car-wheels large enough to prevent the cars from running off the track. (See Fig. 1.) When the rails are to be crossed by highways, the arms C C C are constructed as represented in Fig. 3. It will be seen that they rise immediately after leaving the heads of the pillars and sufficiently high to place a bridge of plank on the upper surface. The flanges of the car-wheels pass between the rails and the plank, and a hook of cast or wrought iron D, Fig. 3, is to prevent the plank from encroaching upon the rails. The upper surface of the arms C, as constructed in Fig. 3, is to be wide enough to sustain well the ends of the plank.

e e, Fig. 7, are sockets about eight inches from the extreme ends of the arms, and *f f* are small tenons projecting from the arms at about the same distance and fitting into the sockets *e e*.

E, Fig. 6, is a clasp or saddle, which sets over both arms when together and the tenons *f f* in the sockets *e e*, as described. It will thus be seen that the arms C C C, pillars A A A, and their bases B B B are held firmly together. The saddle E, if made of wrought-iron, may be clinched below the arm and opened by a small lever, when necessary to do so, in order to make repairs.

g h, Fig. 1, are horns of the rail-chair, which are set diagonally as regards their relative position with the arms C C C. After the pillars A A A are set in the earth the arms C C C are turned some distance apart, as seen in Fig. 8, when the rails are readily placed between the horns on the chair, after which the arms C C C are again brought together and the clasp or saddle E fitted over the arms, by which operation the rails are gripped between the horns *g h* and held in a firmer manner than can be done by either bolts or bars. Fig. 8 clearly shows the principle.

F (seen in most of the figures) is the **I**-rail, which is made of suitable dimensions and varied according to circumstances. The rails should be cut to given lengths while hot by a gate so constructed as to cut the thick edges or flanges *i j*, Fig. 4, somewhat shorter than the center part *k*, and also by the same operation by means of dies locks are formed on the projecting part *k* at the ends of the rail, as seen at *l*, Figs. 4 and 5. When these locks are put together (see Fig. 5) and the arms C C C brought in contact and firmly secured by the clasp and saddle E, the horn *g* will press the inner ridge of the lock of one rail, while

the horn *h* will press the inner ridge of the lock of the other rail, thus keeping the rails firmly together, so that they cannot be separated until the arms C C C are disconnected and moved apart. The horns *g h* being made to press upon the rails in the manner above stated prevents the foundation from inclining longitudinally, and the arms C C C being united, as described, prevents it from inclining transversely. I prefer having the locks of the rails on one side placed opposite the center of each rail on the other side—what is commonly termed "breaking the joints."

The T and all other rails I make and interlock, substantially as herein described. The bases, pillars, horns, and arms are connected or formed of one piece. The advantages of this foundation are the firm manner in which the rails are secured by the horns when the arms are bound together, its comparative low cost, and the great strength and durability which it possesses.

The pillars, bases, and arms may be constructed of cast or wrought iron. I prefer cast-iron.

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

The diagonal position of the horns, by which, with the aid of the arms and clamps, the rails are secured in their proper position.

H. H. MAY.

Witnesses:
W. C. WILLARD,
JOB SWIFT.