

(No Model.)

C. NETTER.
RAILROAD RAIL FASTENER.

No. 404,550.

Patented June 4, 1889.

Fig. 1.

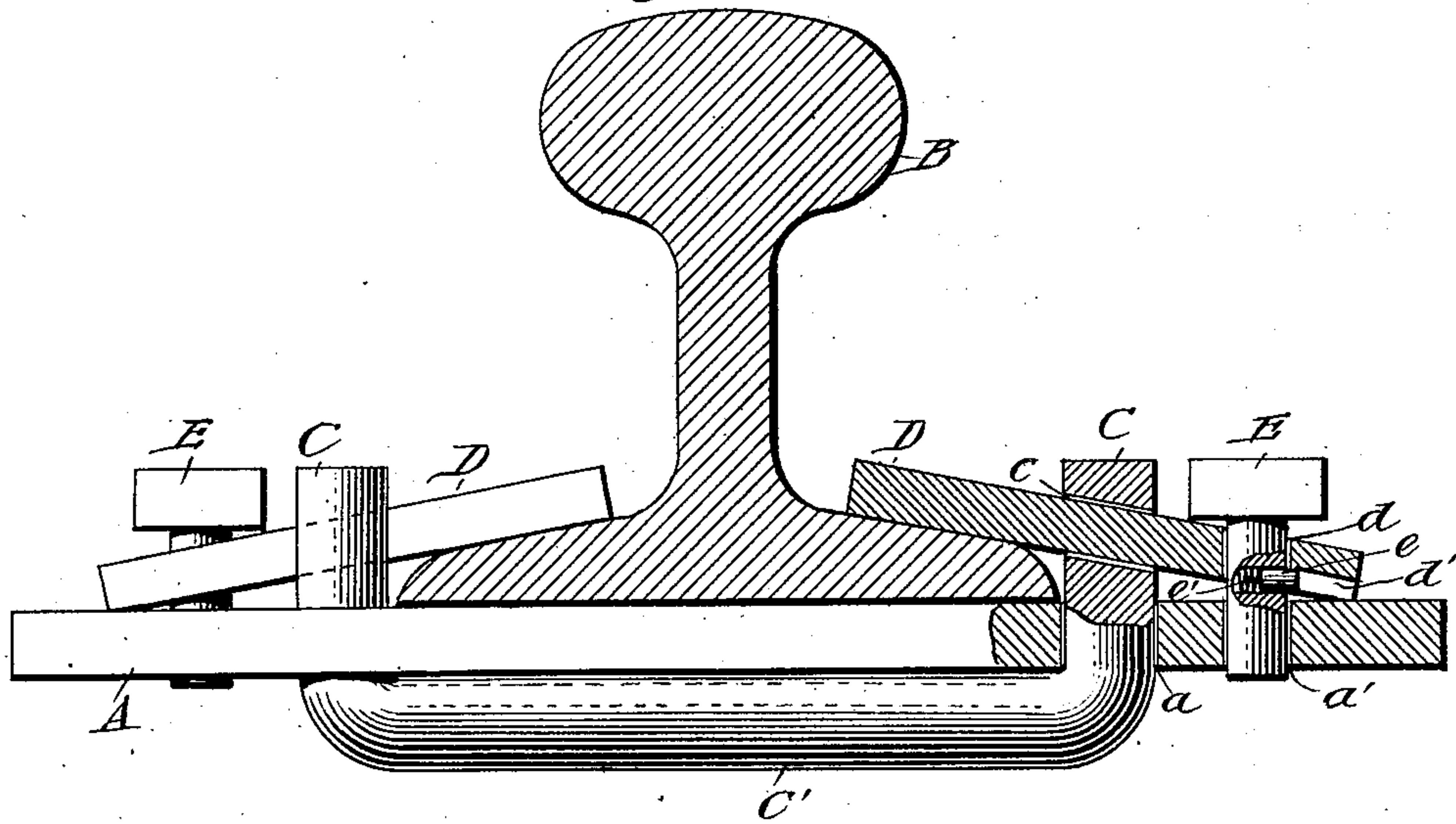


Fig. 2.

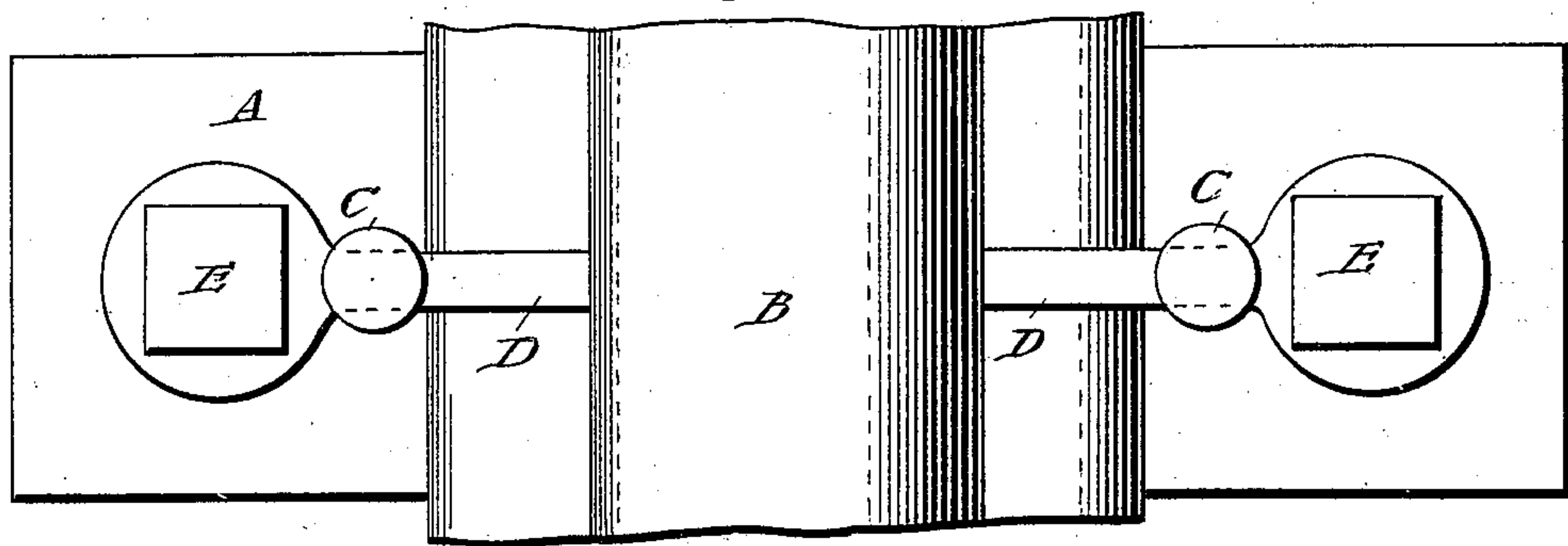
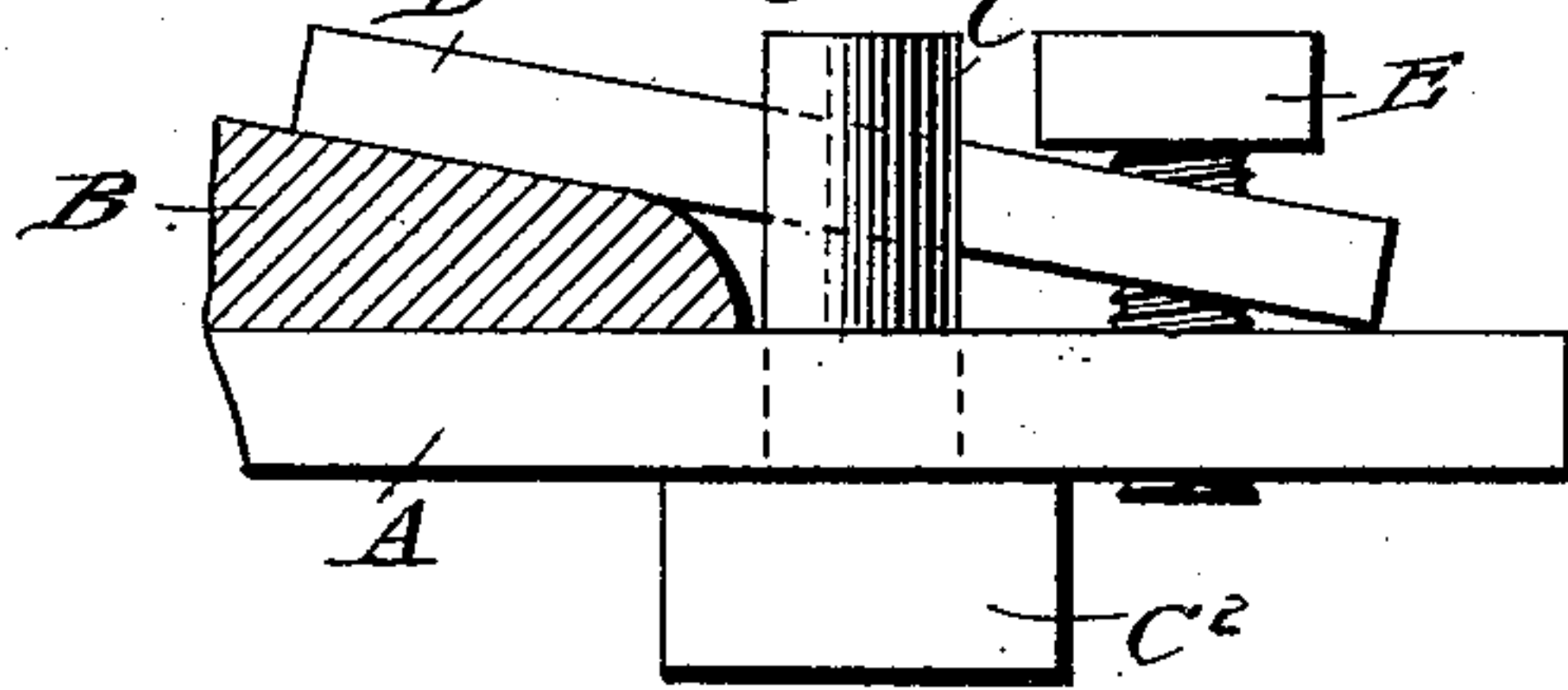


Fig. 3.



WITNESSES:

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RAILROAD-RAIL FASTENER.

SPECIFICATION forming part of Letters Patent No. 404,550, dated June 4, 1889.

Application filed September 21, 1888. Serial No. 285,982. (No model.)

To all whom it may concern:

Be it known that I, CHARLES NETTER, of the city, county, and State of New York, have invented a new and Improved Railroad-Rail Fastener, of which the following is a full, clear, and exact description.

The object of the invention is to furnish a simple form of fasteners for railroad-rails, designed more especially for use in connection with metallic ties, and which may be readily applied.

The invention consists in the novel construction and combination of parts, as herein-after more particularly described, and defined in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is an end view, partly in section, of my new and improved rail-fasteners, a rail being shown in section. Fig. 2 is a plan view thereof, and Fig. 3 is a partial end view showing a modification.

In carrying out the present invention the tie A is formed at each side of the rail B with a vertical hole *a*, and projecting upward from the under side of the tie, through each hole *a*, is a bolt or post C, which is so formed at its lower end as to be prevented from passing entirely up through holes *a*. In the construction shown in Figs. 1 and 2 the bolts or posts C, at each side of the rail, are formed integral with a bar C', which lies underneath the tie and in the present instance is of straight form; but it will be understood when the said bar and bolts are employed with ties having ribs or otherwise uneven in section the bar C' will be formed to correspond. In the form shown in Fig. 3 the posts or bolts C are entirely separate, and each is formed with a head C², which comes to bearing against the under side of the tie A. In both constructions the bolts C project considerably above the upper surface of the tie, and each is formed with a transverse through-slot *c*, as best shown in Fig. 1, the said slot preferably extending in an inclined direction, as shown. Through the slot *c* is passed a bar or key D, whose inner end extends over and bears down on the rail-flange, and the outer end of the key is formed

with a vertical aperture *d*, which is brought into register with a corresponding aperture *a'* in the tie A. A headed locking-bolt E is passed downward through the key D and tie A through the apertures *d* and *a'*, respectively, and the return movement or accidental displacement of said locking-bolt is prevented by the spring-acted pin *e*, which is fitted in a transverse recess in the said bolt. This spring *e'* acts to normally maintain the locking-pin *e* projecting slightly from its recess, so that as the bolt is passed downward the locking-pin *e* is forced out by the action of its spring *e'* into the recess *d'*, formed on the under side of the key D at the outer end. To remove the rail-fastener, a wire or other suitable instrument is passed into the recess *d'* and caused to press the locking-pin *e* of bolt E into its recess, whereupon the said bolt may be withdrawn, which will allow the key D to be removed, leaving the rail unfastened.

Instead of the bolt E being a locking-bolt, as in Fig. 1 and as above described, it may be of the form of an ordinary screw-bolt, as in Fig. 3, or of any other suitable form; but the form first mentioned is to be preferred.

I am aware that it is old to provide bolts projecting through the tie at each side of the rail and through which threaded fasteners are screwed to a bearing on the rail-flange. Such fasteners, however, being round, have but a small bearing-surface on the flange, and being threaded, are liable to unscrew, and are more difficult of insertion than the bars or keys of my invention, which are angular in cross-section and adapted to be slid into position.

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

1. The combination, with a railroad-tie, of bolts projecting upward therethrough at each side of the rail-flange and formed with a transverse slot, keys inserted in said slot to bear on the rail-flange at one end and formed with a vertical aperture at the opposite end, and bolts passing through the said apertures and corresponding apertures in the tie, substantially as described.

2. A rail-fastener comprising a bolt having a transverse slot, an elongated key adapted

to said slot and formed with an aperture at one end, and a bolt adapted to said aperture, substantially as described.

3. The bolt E, formed with a transverse recess, and the spring-acted locking-pin e in said recess, in combination, substantially as described.

4. In a rail-fastener, the combination, with the tie, of a bar lying beneath the same and having upwardly-projecting ends extending

through and above the tie at each side of the rail-flange, and keys or plates engaging said upwardly-projecting ends and bearing down on the rail-flange, the said keys being angular in cross-section, and thus adapted to be slid into position, substantially as described.

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Witnesses:

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