

(No Model.)

F. H. ORCUTT.

GUARD RAIL LOCK FOR RAILROADS.

No. 316,291.

Patented Apr. 21, 1885.

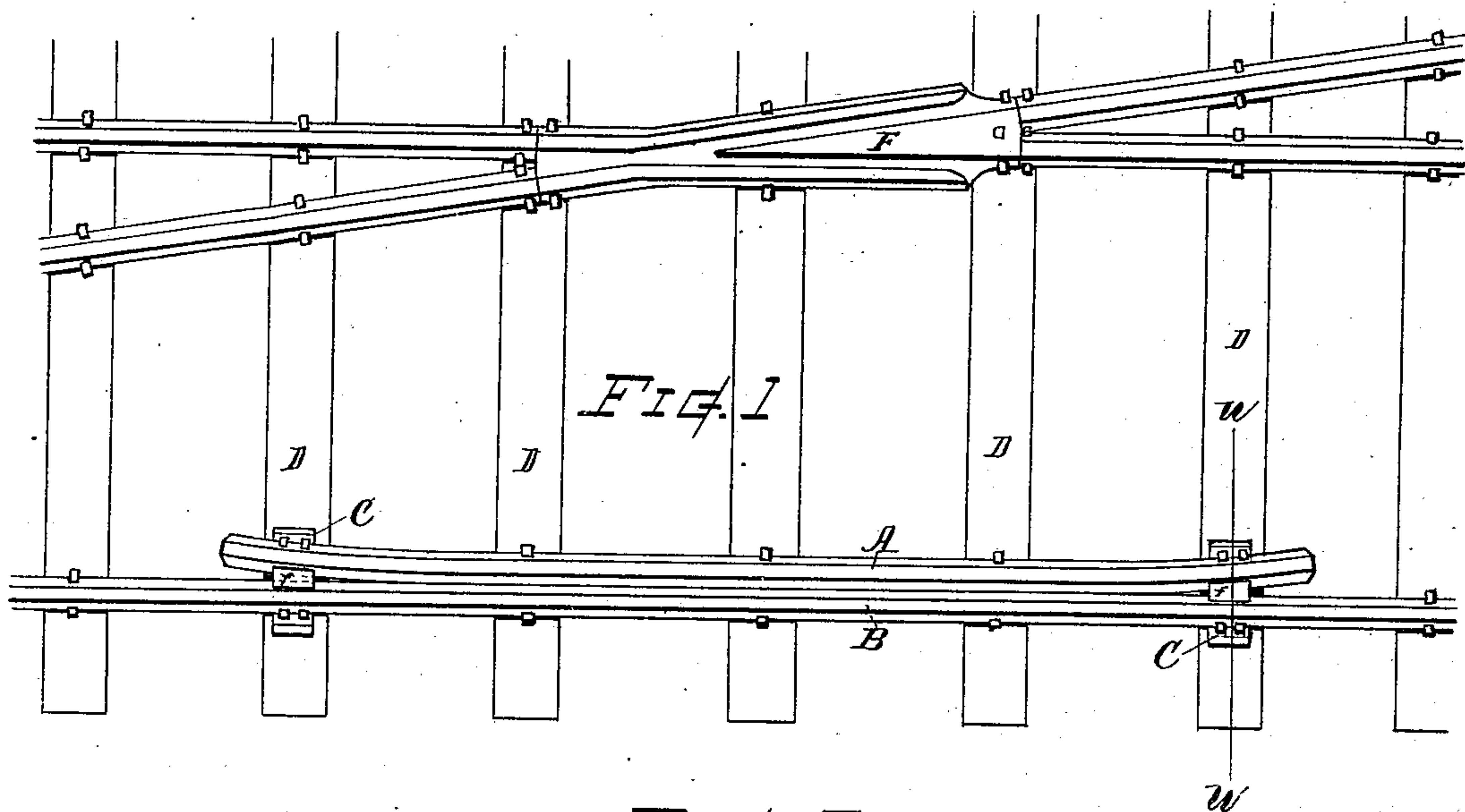
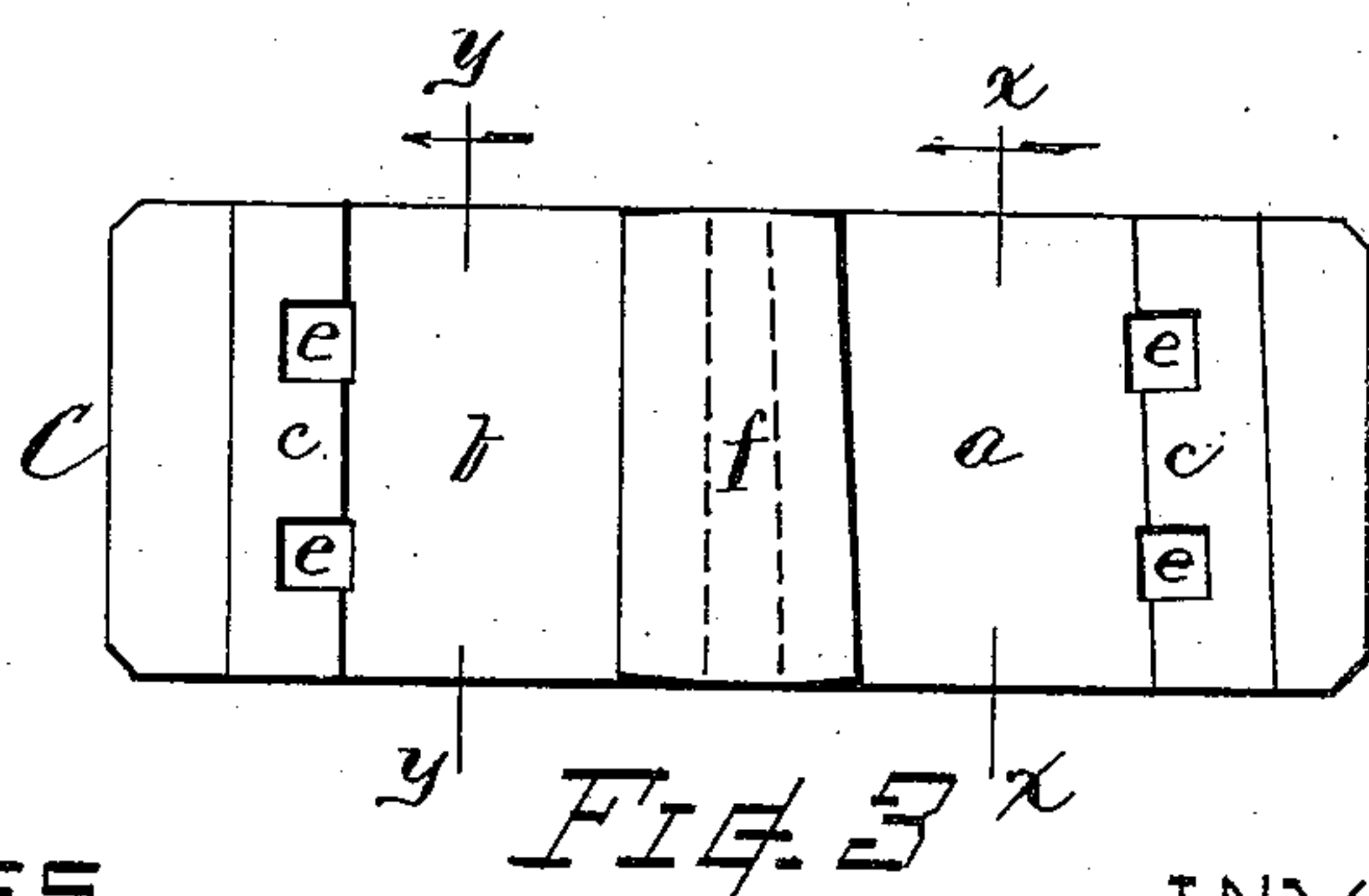
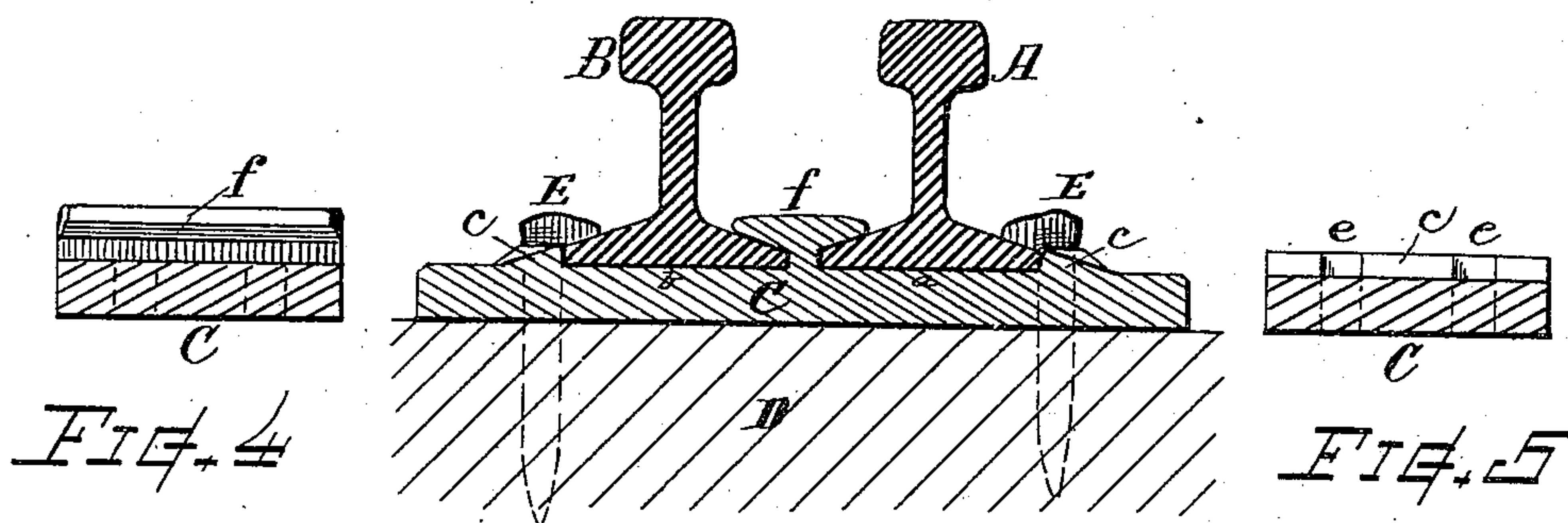


FIG. 2



WITNESSES.

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GUARD-RAIL LOCK FOR RAILROADS.

SPECIFICATION forming part of Letters Patent No. 316,291, dated April 21, 1885.

Application filed August 25, 1884. (No model.)

To all whom it may concern:

Be it known that I, FAYETTE H. ORCUTT, a citizen of the United States, residing at Worcester, in the county of Worcester and State of Massachusetts, have invented certain new and useful Improvements in Guard-Rail Locks for Railroads; and I declare the following to be a description of my said invention sufficiently full, clear, and exact to enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

The object of my present invention is to provide means for locking or attaching the guard-rail and main rail together in a secure and efficient manner, so that the guard-rail cannot be turned over or displaced by side pressure of the car-wheels of a moving train. This object I attain by the guard-rail lock shown and described, the particular subject-matter claimed being hereinafter definitely specified.

In the drawings, Figure 1 is a plan view of so much of a railway turn-out as will illustrate the nature of my invention. Fig. 2 is a section of the locking-plate and rails at line *w w*. Fig. 3 is a plan view of the locking-plate. Fig. 4 is a transverse section of the plate at line *x x*, and Fig. 5 is a transverse section at line *y y*.

In referring to the drawings, A denotes the guard-rail; B, the main rail; C, the locking device; D, the ties or sleepers; E, the spikes, and F the frog.

The guard-rail is located in the usual manner at proper position to act on the inner side of the wheel-flanges and prevent the flange of the opposite wheels from mounting or taking the wrong side of the frog-point. This guard-rail is required to stand so close to the main rail that it is difficult to spike it down with sufficient firmness to resist the lateral strain upon its head, and the giving way and rolling over or displacement of the guard-rail is a source of numerous accidents, as the giving way of the guard-rail permits of the wheels jumping the frog and the derailment of the train.

My improved device or lock for fastening together the guard-rail A and main rail B consists of a plate, C, having seating-surfaces *a b* for the two rails, and provided with a central flange or rib, *f*, that projects upward between the rail-seats, and is furnished with laterally overhanging lips for extending over the adjacent base-flanges of the two rails, so as to give support thereto both from below and above, and thus to positively retain them relatively in the same plane, as indicated in Fig. 2.

At the outside of the seat-surfaces *a b* the plate C is provided with ribs or shoulders *c*, that prevent the base of the rails from sliding laterally or from being released from the lips *c*, except the head of the rail is first tipped toward the center rib to raise the base-flange above the shoulder. When in place, the rails are held firmly to each other laterally, while their flanges are held so that the heads of the rail cannot separate by the rolling of the rail.

Holes *e* for the spikes E are formed through the plate, as shown.

The lock-plate may be made of cast-steel about five inches wide, one inch thick, and fourteen inches long, more or less, according to requirements. This lock device is arranged at the ends of the guard-rail, which are curved outward and away from the main rail, and where there is space sufficient for the double-lipped flange *f* to pass up between the base-flanges of the rails. The lock and the rails are fixed down to the ties by spikes or bolts E, that pass through the holes *e*.

By the two improved locks C the guard-rail A is rigidly attached to the main rail B, so that it cannot be overturned or displaced without absolute fracture of the mechanism.

An additional lock-plate could be placed at an intermediate position of the guard-rail, if desired, by cutting away sufficient of the base-flanges of the rails A and B to give room for the locking-rib *f* to pass up between the rails.

What I claim as of my invention, to be herein secured by Letters Patent, is—

1. A plate for supporting and locking a guard-rail in connection with the main rail, constructed, as shown, with a flat base having

the rail-seats *a* and *b*, the central double-lipped tapered flange *f*, the shoulders *c c* at the outer limit of the rail-seats, and the holes *e*, as described.

- 5 . 2. The combination, with the main rail B and guard-rail A, having its ends curved as shown, of the locking-plate C, provided with the double lipped flange *f* and shoulders *c c*, adapted for supporting and embracing the

base-flanges of said rails, in the manner and 10 for the purpose set forth.

Witness my hand this 16th day of August,
A. D. 1884.

FAYETTE H. ORCUTT.

Witnesses:

CHAS. H. BURLEIGH,
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