

(No Model.)

G. L. CUMMINS.
GUARD RAIL FASTENER.

No. 509,203.

Patented Nov. 21, 1893.

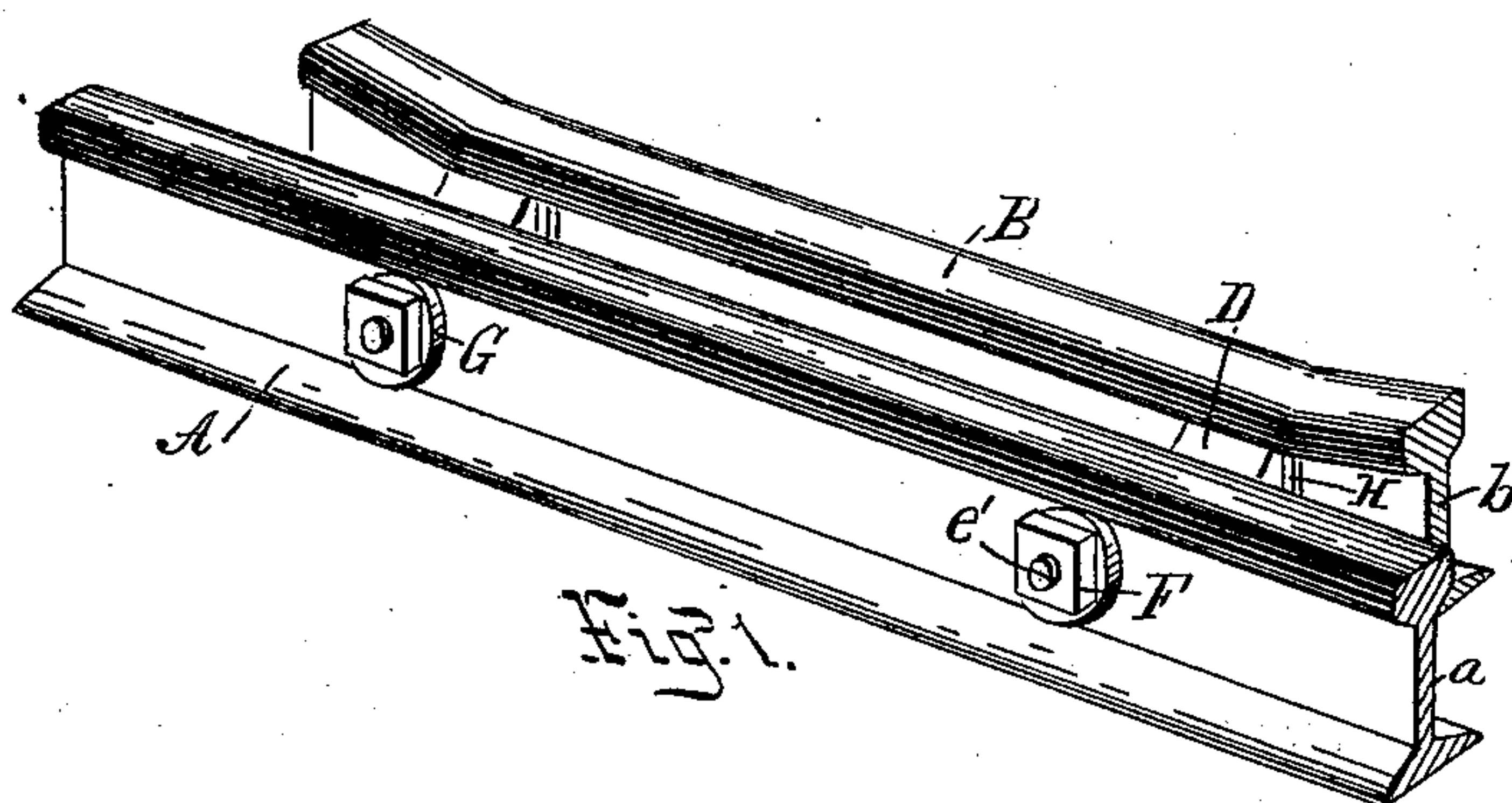


Fig. 1.

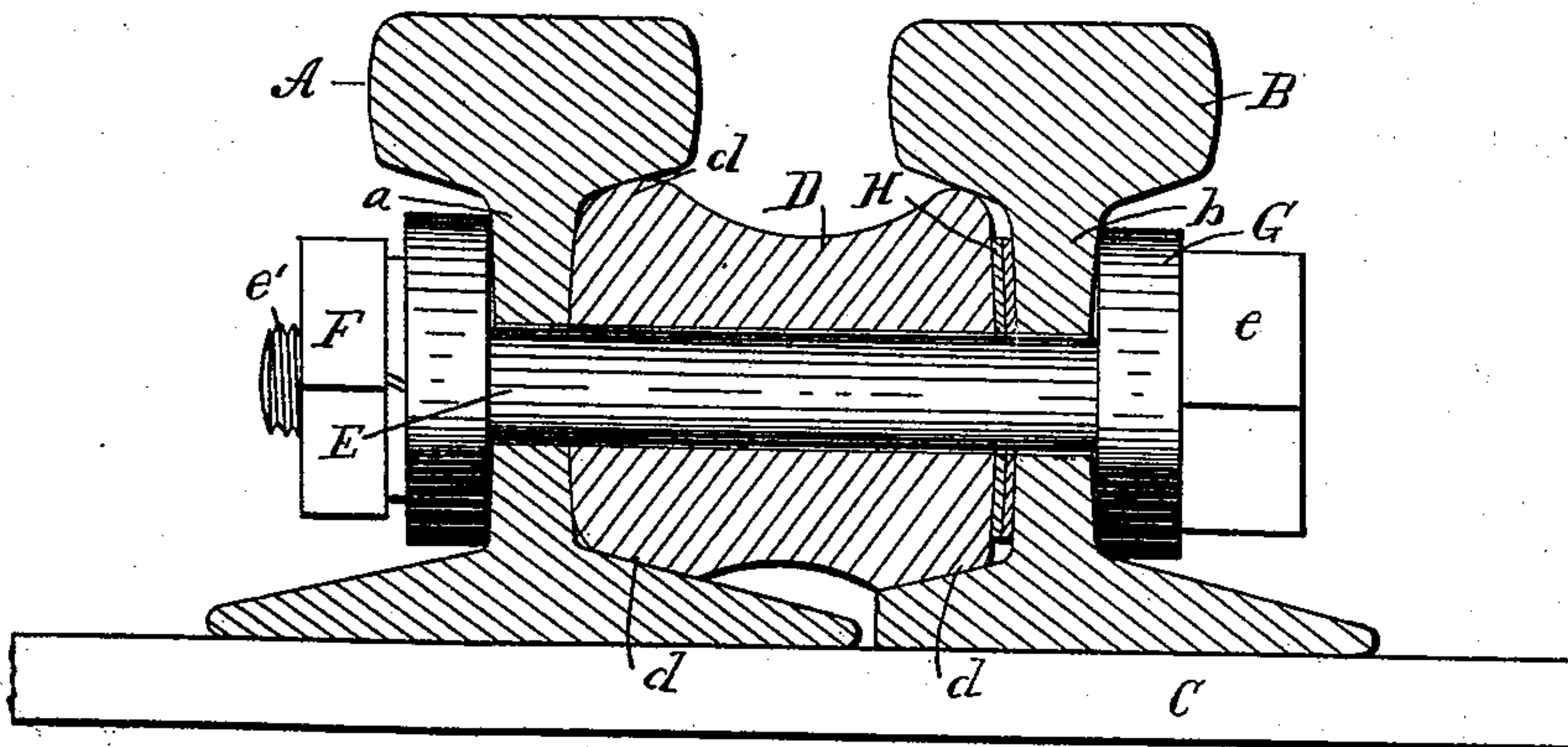


Fig. 3.

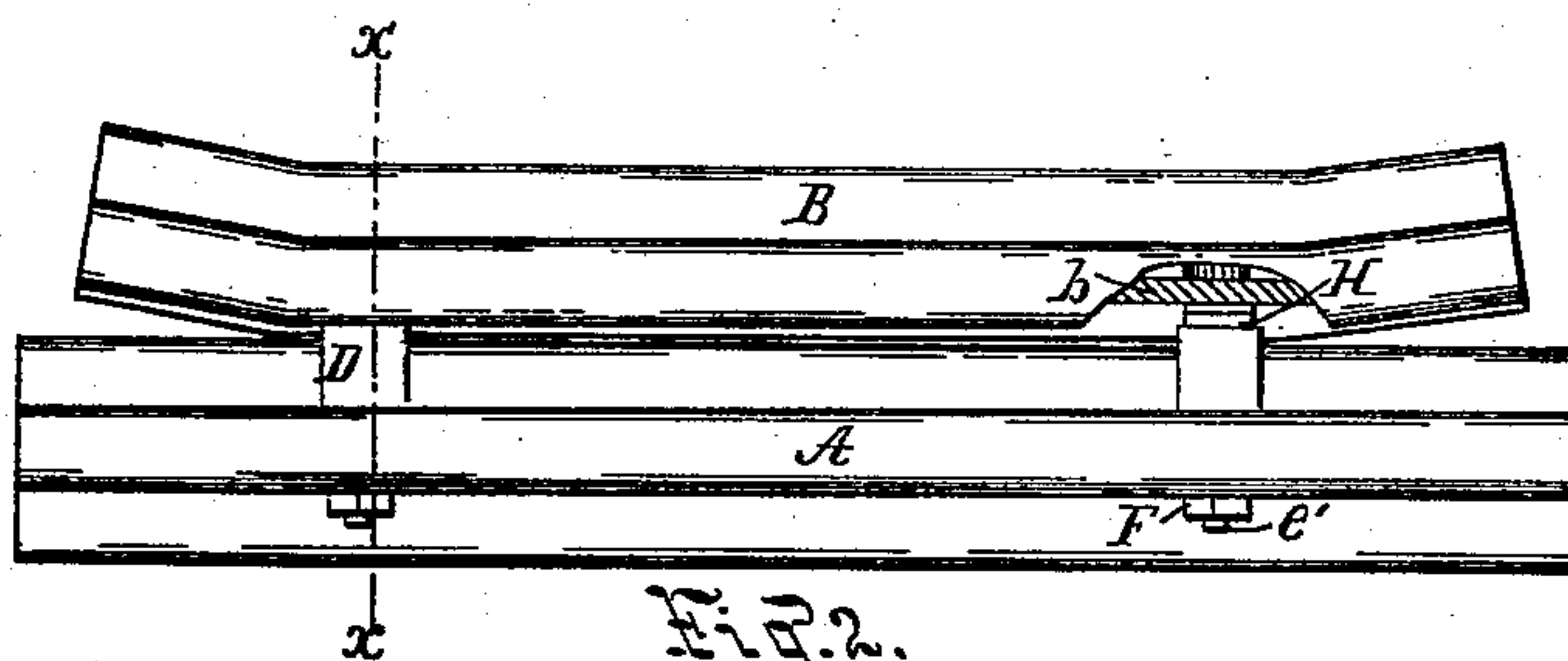


Fig. 2.

Witnesses
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UNITED STATES PATENT OFFICE.

GEORGE L. CUMMINS, OF PHILADELPHIA, ASSIGNOR TO STANDARD GUARD RAIL FASTENER CO., OF LANCASTER, PENNSYLVANIA.

GUARD-RAIL FASTENER.

SPECIFICATION forming part of Letters Patent No. 509,203, dated November 21, 1893.

Application filed May 22, 1893. Serial No. 475,037. (No model.)

To all whom it may concern:

Be it known that I, GEORGE L. CUMMINS, a citizen of the United States, residing in Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain Improvements in Guard-Rail Fasteners, of which the following is a specification.

This invention relates to improvements in that class of fasteners employed for securing guard and other rails to the main rail of a track; and the object of the improvement is to provide a cheap and simple fastener that will be adapted for guard-rails, frogs, and other kindred uses and which will permit the guard-rail as it becomes worn to be adjusted toward the main rail to preserve the proper distance between the two.

The invention consists in the construction and combination of the various parts, as hereinafter fully described, and then specifically pointed out in the claims.

In the accompanying drawings, which form a part of this specification, Figure 1 is a perspective view showing the fastener applied to a guard-rail; Fig. 2, a top plan view of the same, a portion of the head of the guard-rail being cut away, and Fig. 3 a vertical section on the line $x-x$ of Fig. 2.

Similar letters indicate like parts throughout the several views.

Referring to the drawings, A indicates the main rail, and B the guard-rail. Preferably there is a cross-tie C placed under the rails beneath the fastener. Between the guard-rail and the main rail there is located a filling-block D, the ends of which fit up against the webs a and b of those rails and have the corners, d , thereof shaped to fit under and against the heads and on the bases of the rails. The center of the filling-block is cored out to receive a tie-bolt E, that passes through corresponding openings in the centers of the webs of the rails; and between the webs and the head e of said bolt and the nut F on the threaded end e' thereof, are located washers G. Between the filling-block and the web of the guard-rail are placed a number of thin filling-plates H, having bolt holes through them also engaged by the tie-bolt. As the inner edges of the rail-heads are worn away these filling-plates are successively removed and the rails

drawn closer together to take up the wear, so as to clear the flanges of the wheels on the opposite main rail from the frog-point. The number of these filling-plates employed is immaterial, depending upon the extent and number of adjustments of the rails that may be required.

As the neutral line of strain of the filling-block against transverse strain lies through the center thereof, the loss of strength is reduced to a minimum by coring it on that line, so that the greatest resistance against fracture is offered in case of derailment and the engagement of said filling-block by the flanges of the wheels.

If desirable a lock may be used in conjunction with the nut. As shown, an ordinary Verona nut-lock, V, is interposed between nut F and the adjacent washer, but any other nut-lock may be used, or the lock may be formed integral with the nut.

I am aware that there are other guard-rail fasteners in use; but generally they are constructed with clamp-plates that take under the rails and have hooks and other contrivances connected therewith that make them costly in construction, besides requiring undue time and labor to attach and remove them. My fastener is, on the contrary, exceedingly simple in construction, and can be put in place, adjusted, or removed as easily as any ordinary fish-plate.

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

1. The combination, with the rails, of a filling-block located between them, filling-plates interposed between the filling-block and one of the rails, and a tie-bolt passing through the rails, the filling-block, and the filling-plates, substantially as and for the purpose specified.

2. The combination, with the rails, of a filling-block cored out through the center and located between said rails, filling-plates interposed between the filling-block and one of the rails, and a tie-bolt passing through the rails, the filling-block, and the filling-plates, substantially as and for the purpose specified.

3. The combination, with the rails, of a filling-block located between the webs thereof, filling-plates interposed between the filling-

block and the web of one of the rails, and a tie-bolt passing through said webs, the filling-block, and the filling-plates, substantially as and for the purpose specified.

- 5 4. The combination, with the rails, of a filling-block cored out through the center and located between the webs of the rails, filling-plates interposed between the filling-block

and the web of one of the rails, and a tie-bolt passing through said webs, the filling block 10 and the filling-plates, substantially as and for the purpose specified.

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Witnesses:

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