

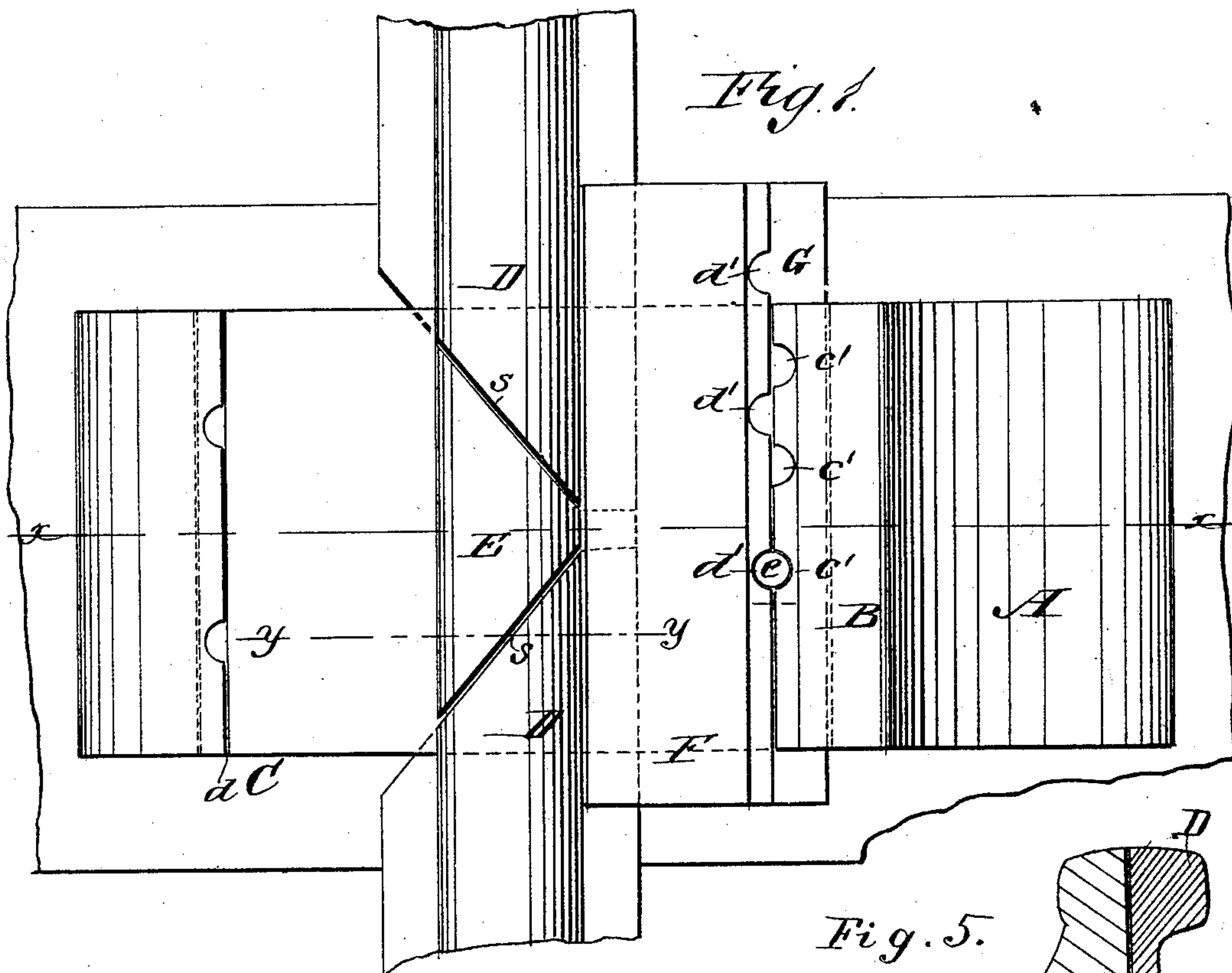
(No Model.)

E. A. TEMPLE.

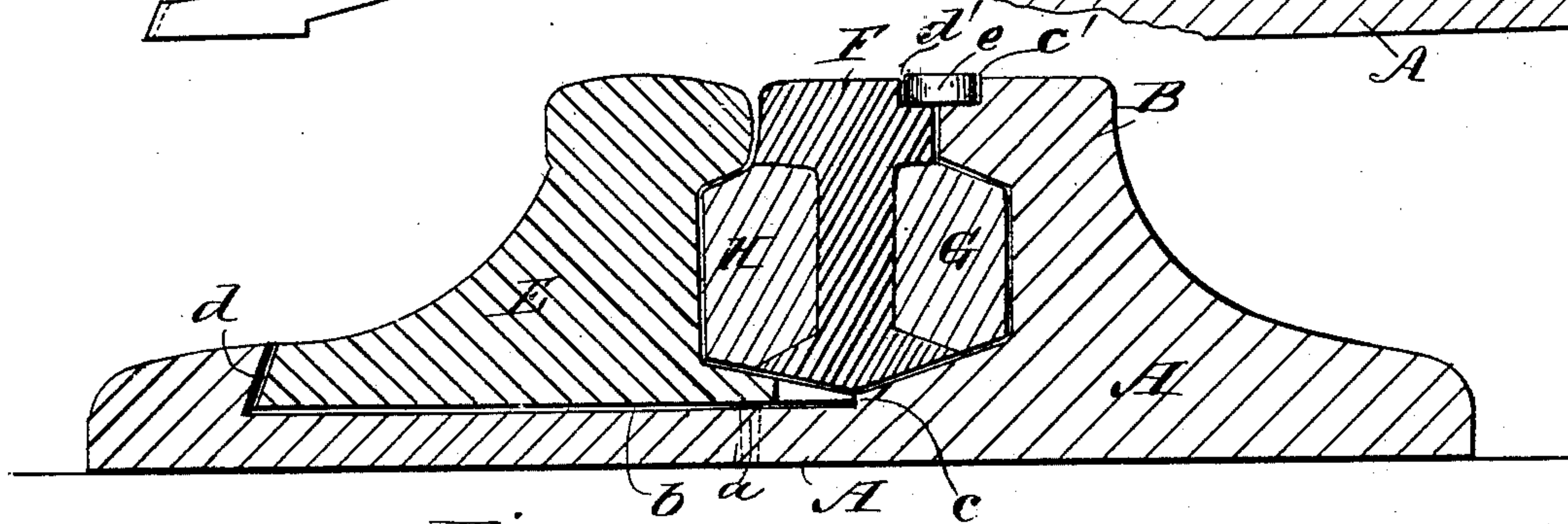
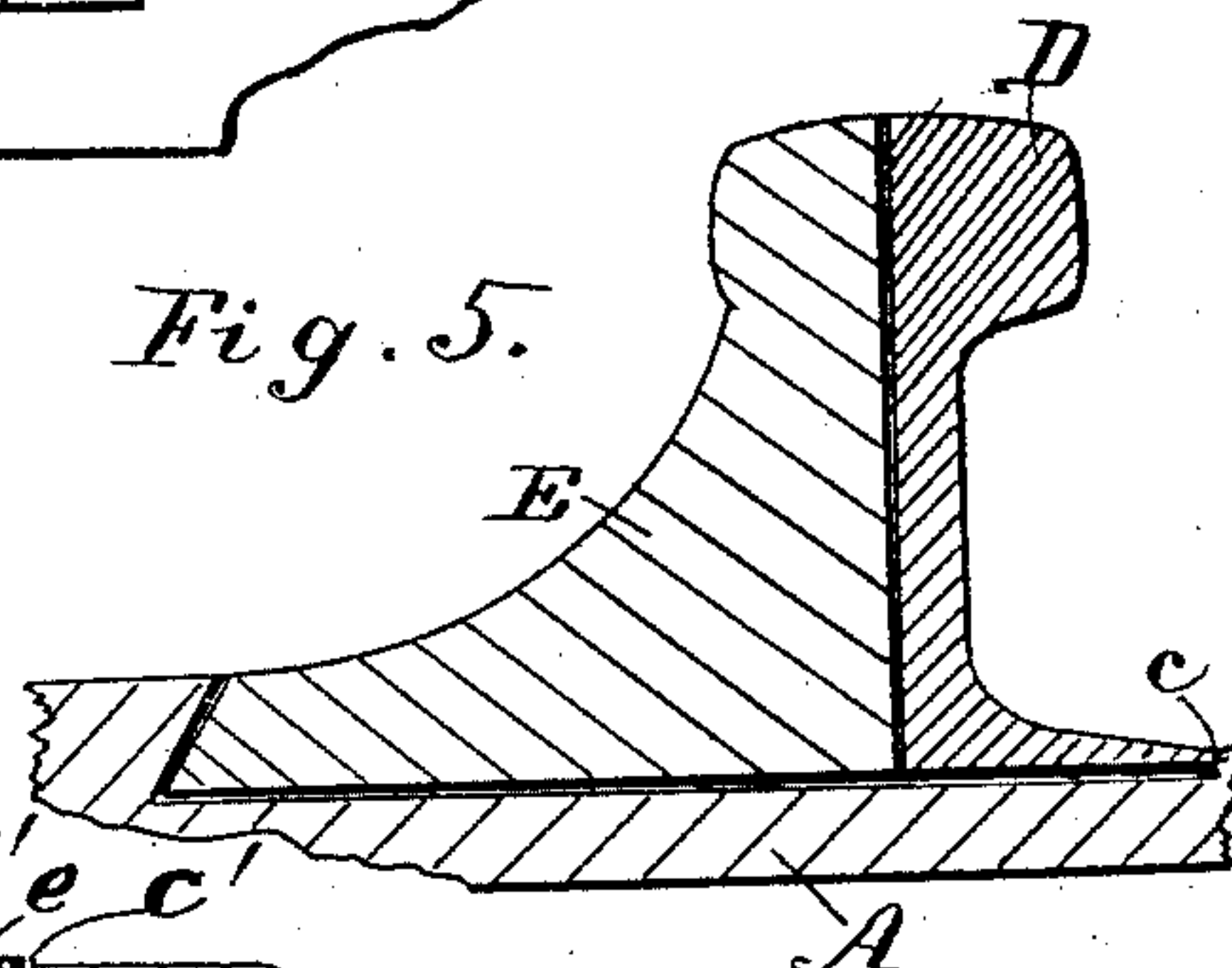
RAIL JOINT.

No. 348,704.

Patented Sept. 7, 1886.



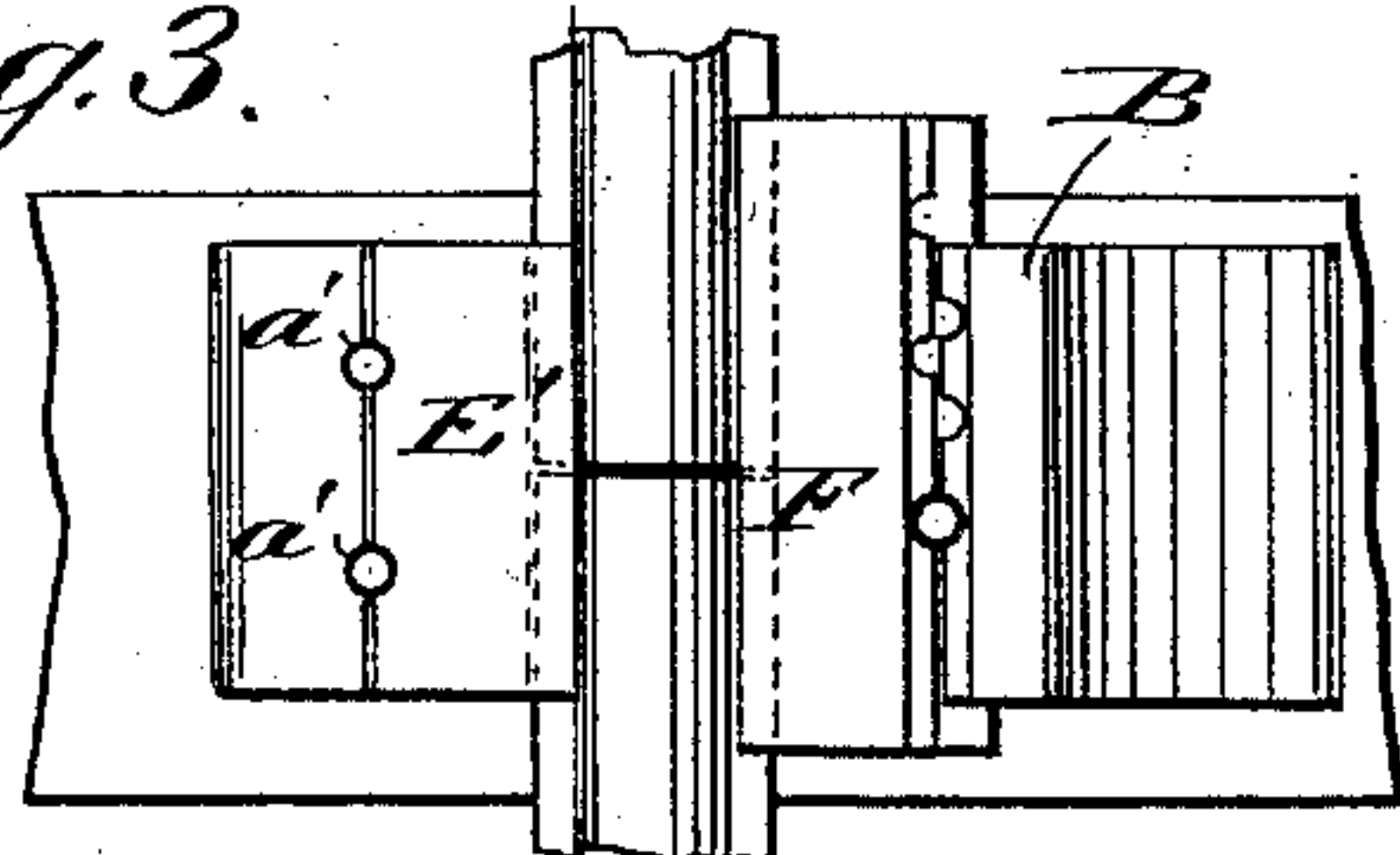
*Fig. 2.*



*Fig. 3.*

WITNESSES:

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# UNITED STATES PATENT OFFICE.

EDWARD A. TEMPLE, OF CHARITON, IOWA.

## RAIL-JOINT.

SPECIFICATION forming part of Letters Patent No. 348,704, dated September 7, 1886.

Application filed March 11, 1886. Serial No. 194,843. (No model.)

*To all whom it may concern:*

Be it known that I, EDWARD A. TEMPLE, of Chariton, in the county of Lucas and State of Iowa, have invented a new and Improved Rail-Joint, of which the following is a full, clear, and exact description.

This invention relates to the construction of a rail-joint designed to prevent the battering of the end of the rail, and to do away with the ordinary form of bolt and nut, using instead a key or wedge of wood or metal or a combination of both, as may be desired, as will be hereinafter explained.

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 a plan view of my improved rail-joint. Fig. 2 is a sectional view of the same, taken on line *xx* of Fig. 1. Fig. 3 is a view of a modified construction. Fig. 4 is a detail view illustrating the construction of the inner wedge used in connection with the modification illustrated in Fig. 3. Fig. 5 is a section on line *yy*, Fig. 1.

In constructing such a joint as is illustrated in Figs. 1 and 2 of the drawings above referred to, I provide a chair, A, arranged with an upwardly-projecting flange, B, upon the outside, said chair being secured to the cross-tie C in the ordinary manner by spikes. The chair A is formed with a seat, *b*, upon which the approaching ends of the rails D D rest, there being a rectangular shoulder, *c*, at the outer side of the seat, against which the bases of the rails abut, as clearly shown. The chair A projects upward from the inner edge of the seat *b* in a diagonal line, so as to form an angular shoulder, *d*, as best shown in Fig. 2. The meeting ends of the rails D D are cut at an angle, so that when they are placed in the position shown in Fig. 1 there will be a V-shaped opening between them, which is filled by a bridge, E, formed to rest upon the seat of the chair, and abut against the beveled ends of the rails, that portion of the bridge only corresponding with the beveled portions of the rails being cut away to a bevel, so that there will be a solid abutment introduced between the tread and base of the rails, as clearly shown in Fig. 5.

Between the flange B and the outer side of the rail I introduce a metallic core, F, which in cross section approximates the form of a T-rail, and upon either side of this core I introduce wooden wedges G H, which are driven in so as to firmly lock the parts in place, or I use the key or wedge in one piece, as I prefer, for the same purpose, the said key or wedge being constructed of wood or metal, as may be desired. Semicircular recesses *c' c'* are formed, as shown, in the edge of the flange B, while other recesses, *d' d'*, which are slightly farther apart than are the recesses *c'*, are formed in the outer edge of the upper section of the core F, the idea being to secure the parts in position by the driving in of a spike or pin, *e*, introduced at a point wherein one of the recesses *d'* registers with one of the recesses *c'*.

In order that the rails may be held from creeping, I form the chair and rail with holes, as shown in Fig. 2, and in these holes, which register, I insert pins *a a*, as shown in Fig. 2, the pin being under that portion of wedge marked H, and being thereby held to its position.

In Fig. 3 I illustrate a construction wherein rails with square ends are used, and in this case the V-shaped bridge E is dispensed with and its place supplied by an inner block, E', the parts being held from creeping by pins *a'*, inserted as shown.

It will be readily understood from the construction described that all battering and jar incident to the wheels of the car passing from rail to rail will be avoided, as the blocks or wedges F will act as a bridge.

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

1. In a rail-joint, the combination, with a chair, of a block resting in a seat of the chair and constructed to fit against the ends of the rails, a wedge on the opposite side of the rails between the said rails and a flange of the chair, and means for locking the said wedge in place, substantially as herein shown and described.

2. In a rail-joint, the combination, with a flanged chair and rails having beveled ends, of a V-shaped bridge fitting in the V-opening between the rails, and a wedge on the opposite

side of the rails between the said rails and the flange of the chair, substantially as herein shown and described.

3. The combination, with rails formed with  
5 beveled ends, of a chair formed with a flange, B, a V-shaped bridge, and a locking device consisting of a core and wedge-shaped wooden blocks G and H, substantially as described.

4. The combination, with rails formed with

beveled ends, of a chair formed with a flange, 10 B, and shoulders *c* and *d*, a V-shaped bridge, E, formed to abut against the shoulder *d*, a core, F, wedge-shaped blocks G and H, and a pin, *e*, substantially as described.

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Witnesses:

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