

(No Model.)

W. H. BRITTON.

RAILROAD TIE.

No. 382,134.

Patented May 1, 1888.

Fig. 1.

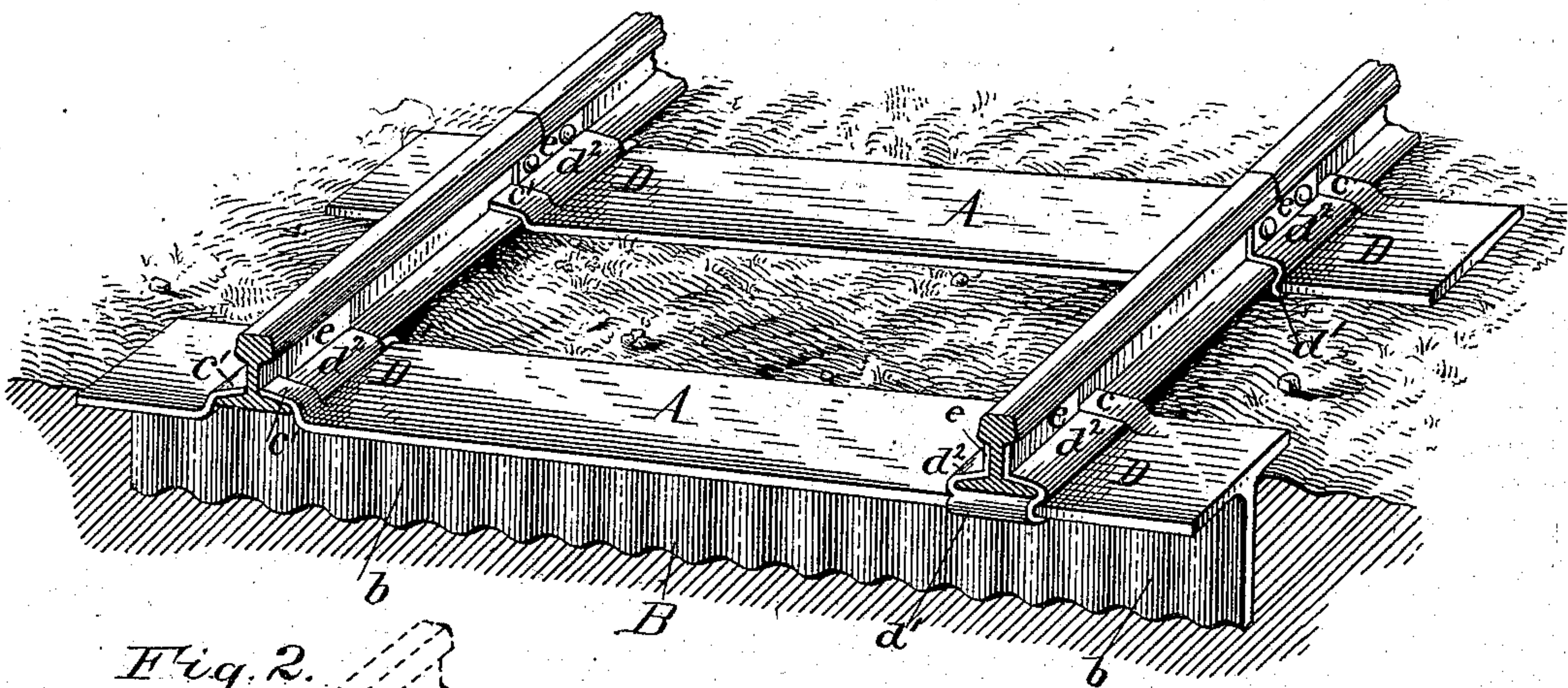


Fig. 2.

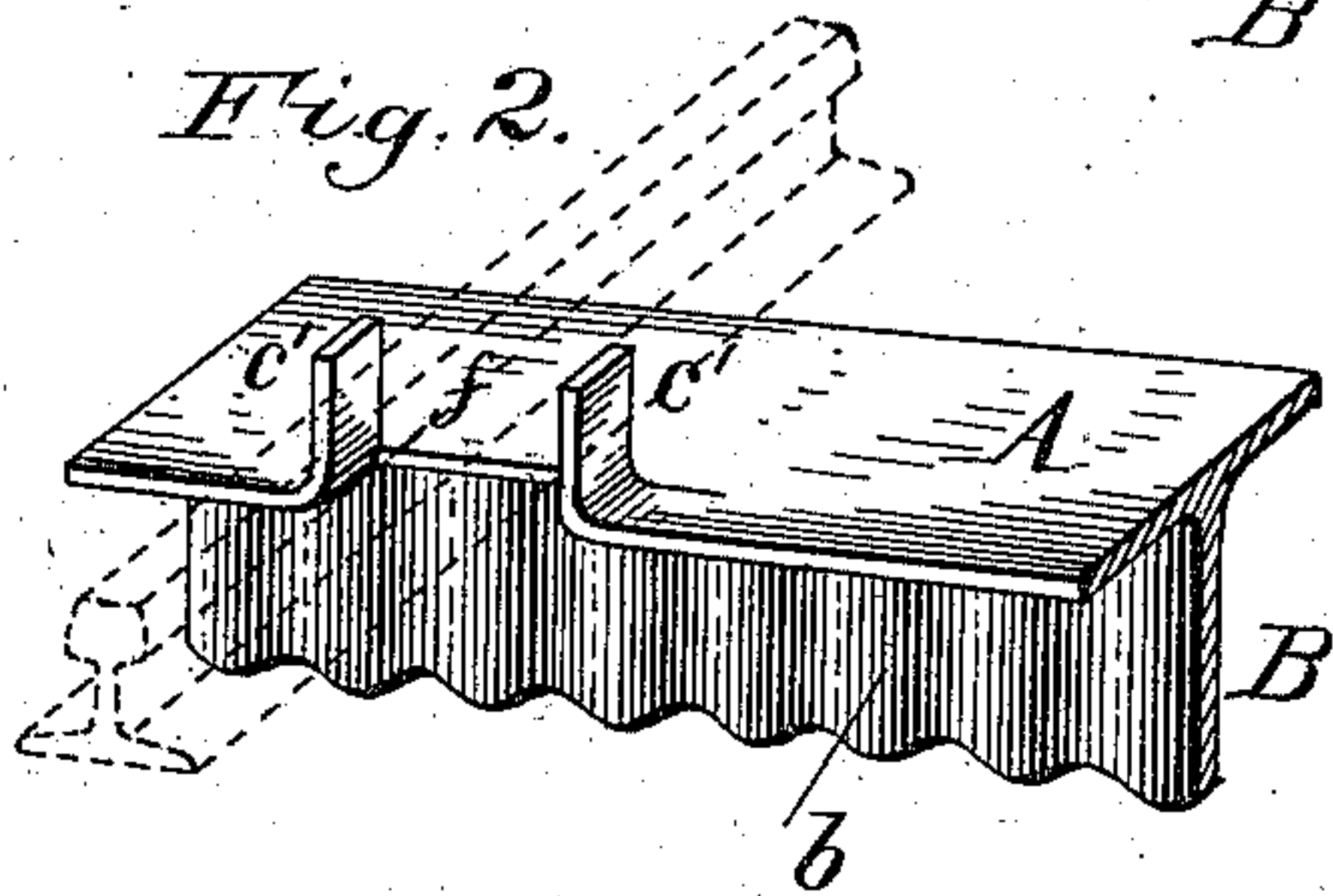


Fig. 3.

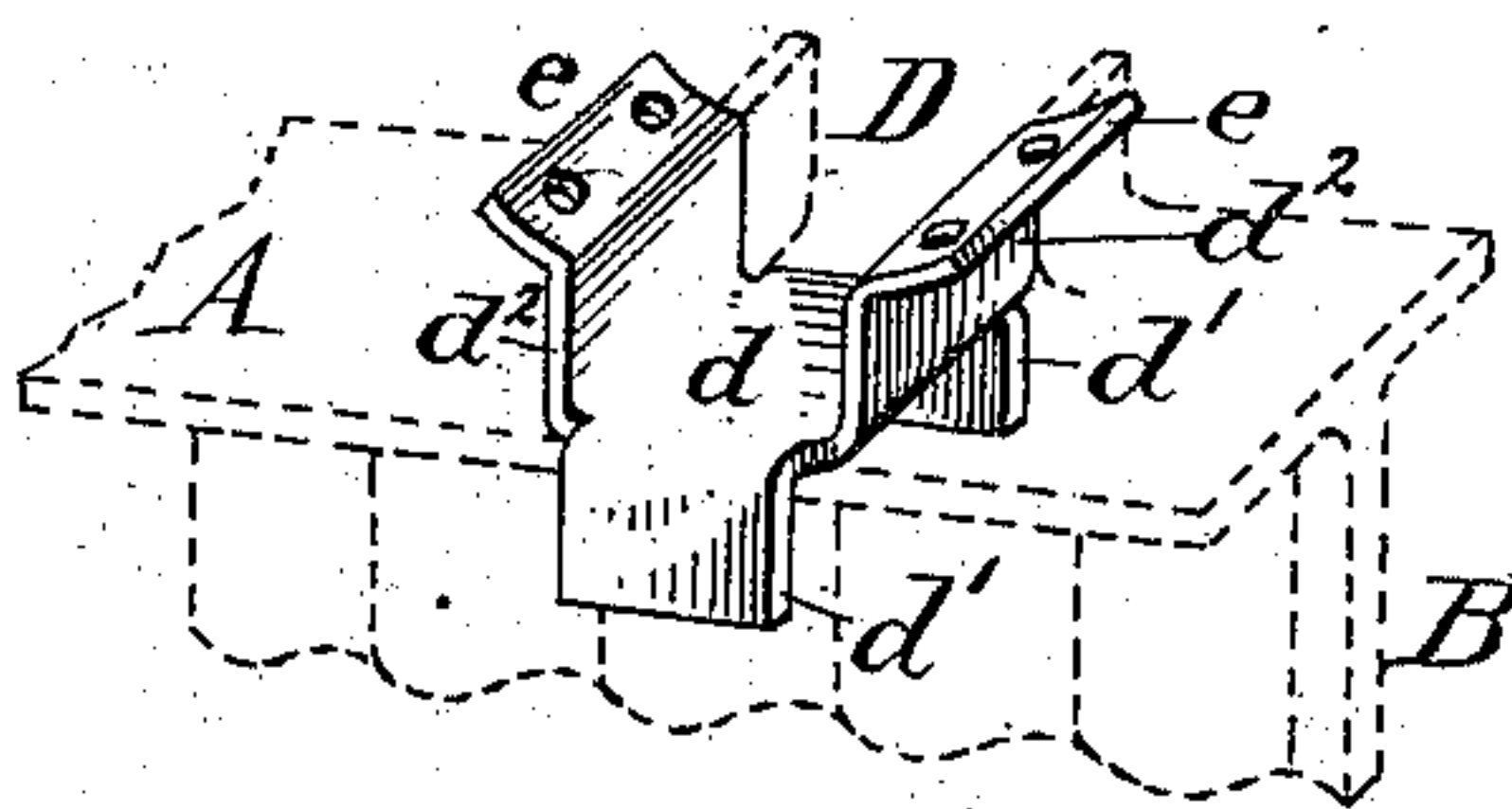


Fig. 5.

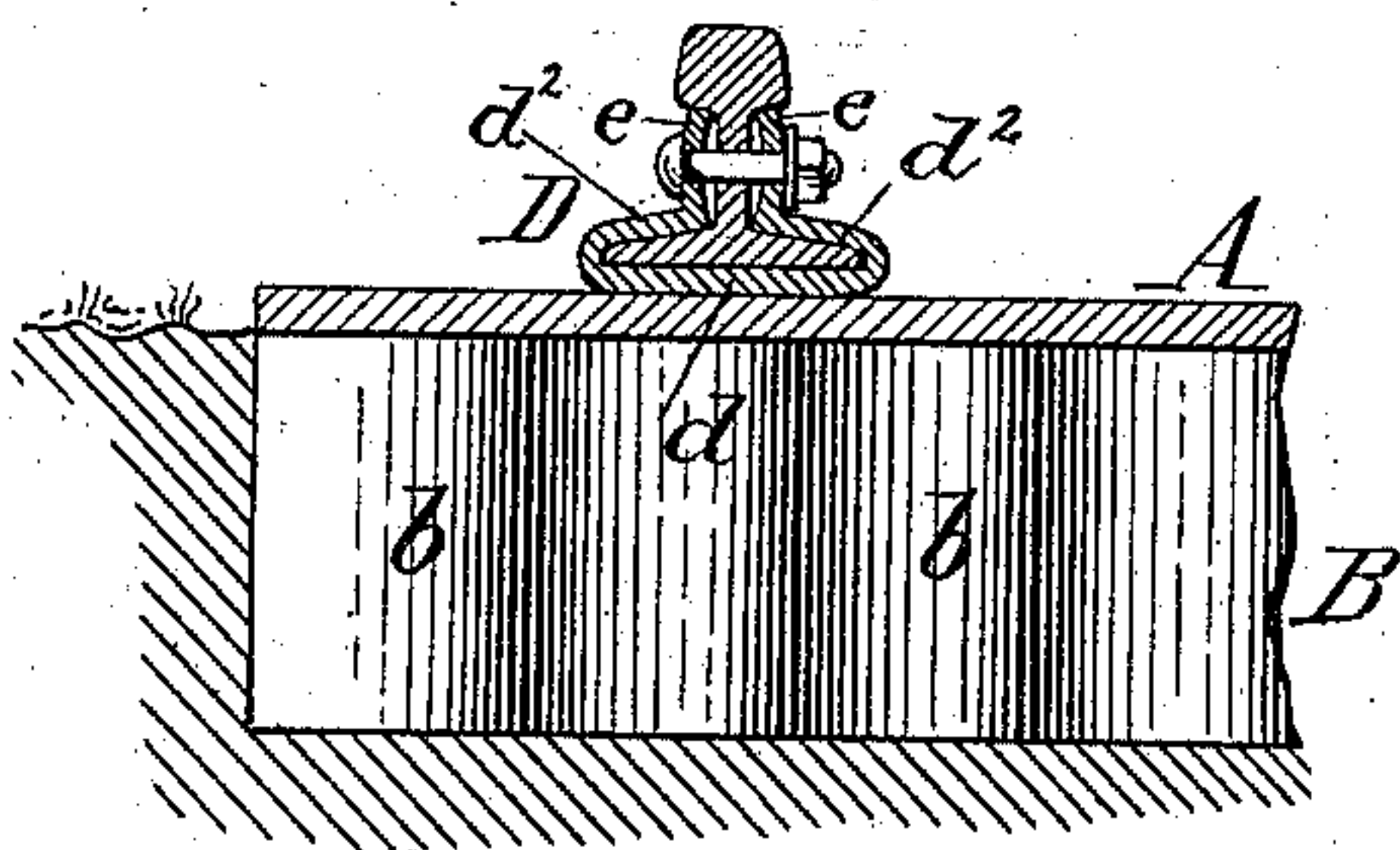
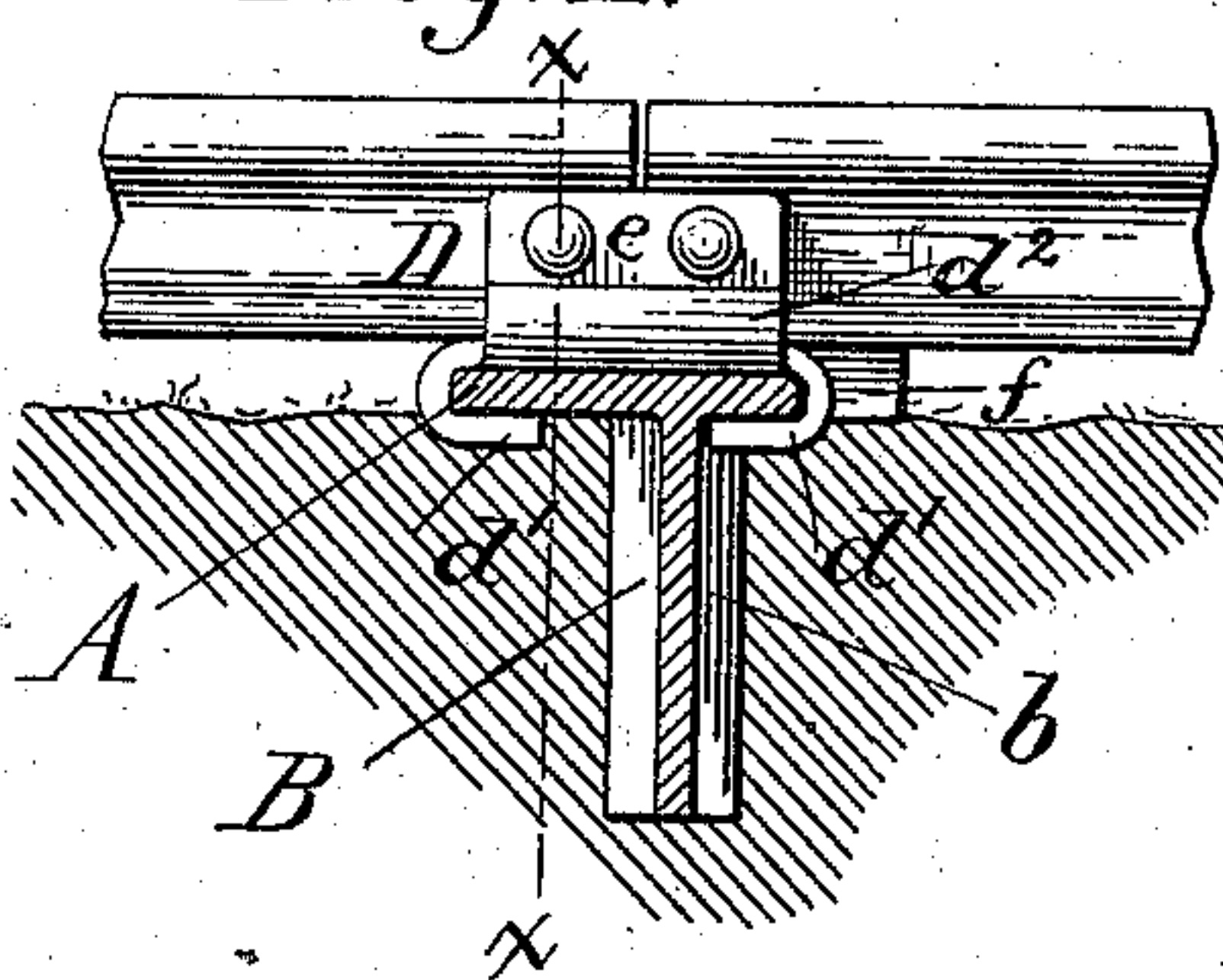


Fig. 4.



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UNITED STATES PATENT OFFICE.

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RAILROAD-TIE.

SPECIFICATION forming part of Letters Patent No. 382,134, dated May 1, 1888.

Application filed February 2, 1888. Serial No. 262,704. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. BRITTON, of the city of Buffalo, in the county of Erie and State of New York, have invented new and useful Improvements in Railroad-Ties, of which the following is a specification.

This invention relates to improvements in that class of metallic railway-ties which are provided with means for holding the same against lateral movement, and it has for its object to construct a simple, light, and durable tie of this class, which can be produced at small cost.

Another object of the invention is to provide an efficient fastening for securing the rails to the ties.

The invention consists of the improvements which will be hereinafter fully described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a perspective view of a portion of a railway provided with my improved tie. Fig. 2 is a perspective view of a portion of the tie, showing the lips formed on the bed-plate thereof. Fig. 3 is a perspective view of the chair or fastening whereby the rail is secured to the tie. Fig. 4 is a side elevation of the chair or fastening applied to the tie. Fig. 5 is a cross-section in line *x x*, Fig. 4.

Like letters of reference refer to like parts in the several figures.

My improved tie is constructed of T form, and is composed of a horizontal bed-plate, A, and a vertical rib or plate, B, arranged centrally on the under side of the bed-plate A and extending longitudinally from end to end thereof. The rib or plate B is embedded in the ground, and is provided with vertical corrugations *b*, extending from the upper to the lower ends of the rib. The ground in the spaces between these corrugations holds the ties firmly in position and prevents the same from being worked laterally by the jars and strains to which they are subjected, thereby always maintaining the rails in proper alignment.

My improved tie may be rolled of wrought iron or steel. It is very simple in construction and can be manufactured at comparatively small expense.

c c' represent lips formed on the bed-plate A and engaging over the base-flanges of the rails on opposite sides thereof. One set of these lips, *c*, is preferably arranged at one edge of the bed-plate A, while the other set of lips, *c'*, is arranged at the opposite edge of the bed-plate, as shown in Fig. 1, so as to form a rigid connection between the rails and the bed-plate at both edges of the latter. Before applying the rails to the ties the lips *c c'* are bent so as to stand in the position indicated in Fig. 2, and after the rails have been laid between the lips the latter are bent over the base of the rails.

In addition to the lips *c c'*, I prefer to employ a chair or fastening, D. This fastening consists of a horizontal plate, *d*, upon which the rail rests, which plate is provided with depending lips *d'*, which are bent around the edges of the bed-plate A, and with upwardly-projecting lips *d''*, embracing opposite sides of the base-flanges of the rail. The lips *d''* are provided with upward extensions *e*, which bear against the web of the rail and serve as fish-plates for connecting the adjoining ends of the rails. The fish-plates *e* are provided with holes, through which pass suitable fastening-bolts. The chairs D are constructed of sheet metal, so that their lips can be readily bent into position. Before laying the rails the chairs D are secured to the ties and the lips *d''* and fish-plates or extensions *e* are bent into the position shown in Fig. 3. The rails are then placed between the lips and fish-plates and the latter are bent around the base of the rail and against its web. When these chairs or fastenings D are employed only for securing the rails to the ties, as shown in the lower portion of Fig. 1, and are not required to serve also as fish-plates, the bolt-holes of the extensions *e* may be omitted.

By cutting the lips *c c'* shoulders *f* are formed on the bed-plate A, between which one of the lips *d'* is confined and whereby the chair D is held against lateral movement on the ties. The lips *c c'* and chairs D secure the rails firmly to the tie and prevent the rails from spreading.

I claim as my invention—

1. A metallic railroad-tie composed of a horizontal bed-plate, A, and a vertical rib or plate,

B, provided with vertical corrugations, substantially as set forth.

2. A metallic railroad-tie composed of a horizontal bed-plate, A, and a vertically-corrugated rib or plate, B, arranged centrally on the under side of the bed-plate and extending lengthwise thereof, substantially as set forth.

3. In a metallic railroad-tie, the combination, with the horizontal bed-plate A and the vertically-corrugated rib or plate B, of lips *c* and *c'*, formed integral with the bed-plate, one set

of said lips being arranged at or near one edge of the bed-plate and the other set of lips at or near the opposite edge of the bed-plate, substantially as set forth.

Witness my hand this 24th day of December, 1887.

WILLIAM H. BRITTON.

Witnesses:

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