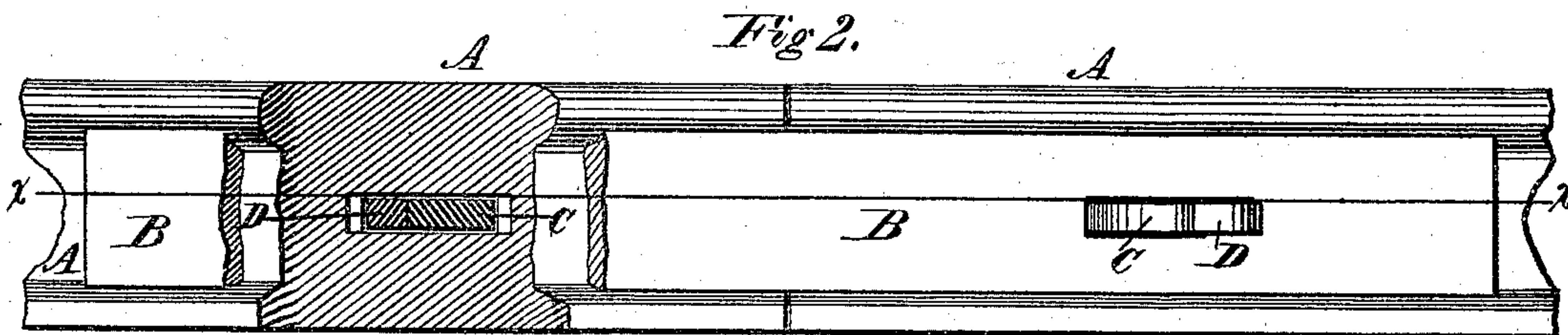
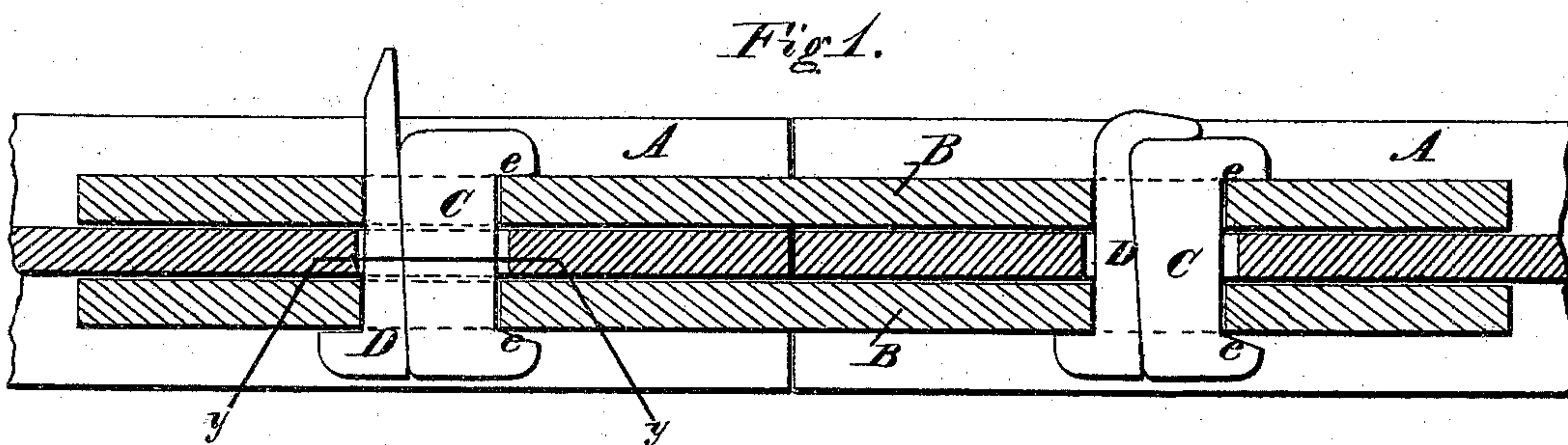


A. E. BRAYMER.

Improvement in Securing Fish-Plates to Railway-Rails.

No. 130,562.

Patented Aug. 20, 1872.



Witnesses.

Harry King.
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UNITED STATES PATENT OFFICE.

ALBERT E. BRAYMER, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN SECURING FISH-PLATES TO RAILWAY RAILS.

Specification forming part of Letters Patent No. 130,562, dated August 20, 1872.

To whom it may concern:

Be it known that I, ALBERT E. BRAYMER, of Chicago, Cook county, State of Illinois, have invented a new and Improved Method of Securing Fish-Plates to Railroad Rails, of which the following is a description, the accompanying drawing forming a part thereof.

Figure 1 is a longitudinal transverse section on the line *xx* of Fig. 2, and Fig. 2 is a side elevation, with a portion broken away, on the line *yy* of Fig. 1.

It is customary to secure fish-plates to the joints of railway rails by means of bolts and nuts, but this method is very defective, for the reason that the continued jar caused by passing trains tends to loosen the nuts, and this has given rise to many devices for locking the nuts. These devices, however, add to the expense, and frequently fail to accomplish the desired object.

My invention consists of securing the fish-plates to the rails by means of gibs and keys, by which all these difficulties are avoided, and a cheap and secure fastening is obtained.

To accomplish this result I use fish-plates constructed in the ordinary manner, except that instead of bolt-holes, I provide them with slots or elongated rectangular holes, as represented in Fig. 2, the rails A being provided with corresponding slots or holes. I then provide gibs C having shoulders *e* formed thereon, as represented in Fig. 1, these shoulders, one or both, being somewhat inclined on their inner sides next to the plates B, for the purpose of acting as a clamp to draw the plates snugly up against the sides of the rail, as represented. I then provide wedge-shaped keys D, having a head projecting from one side at

one end, as shown in Fig. 2, these keys being somewhat longer than the gibs C. The rails and plates being placed in position, the gib C is inserted through the holes in both, and the wedge or key D is then driven in behind the gib, thereby forcing the latter edge-wise, and causing its inclined shoulders *e* to engage upon the outer sides of the plates B, and thus to draw them tight against the rails and clamping all together in the most effectual manner. After the key D is driven sufficiently tight, its smaller end will project beyond the end of the gib, and it is then bent or clinched over it, as represented in Fig. 1, thus locking all the parts securely in place. As the gibs and keys can be punched by machines direct from plate-metal, they are cheaper to make than bolts and nuts, and when once applied they cannot be displaced or loosened, as the bolts and nuts are by the jar of the rails. Provision is made for the expansion and contraction of the rails, by making the holes in the rails a little longer than those in the plates.

I am aware that gibs and keys are old devices, and that they have been used in various ways and for various purposes, and therefore I do not claim them; but I am not aware that fish-plates have ever before been secured to railway rails, in the manner herein set forth.

Having thus fully described my invention, what I claim is—

The fish-plates B secured to the rails A by means of the gibs C and the keys D, substantially as described.

ALBERT E. BRAYMER.

Witnesses:

F. F. WARNER,
F. H. BROWN.