J. B. TAPSCOTT.

Railway-Rail Joint Fastening.

No. 161,839. Patented April 6, 1875.

Fig. 2.

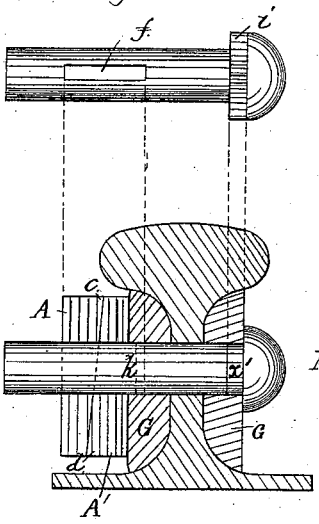


Fig. 1.

Fig. 4.

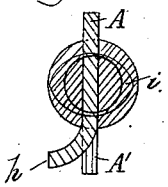


Fig. 5.

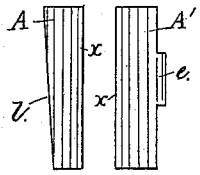
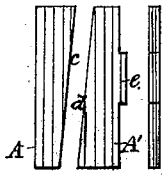


Fig. 3.



Witnesses.

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UNITED STATES PATENT OFFICE.

JOHN B. TAPSCOTT, OF CLARKSVILLE, TENNESSEE.

IMPROVEMENT IN RAILWAY-RAIL-JOINT FASTENINGS.

Specification forming part of Letters Patent No. **161,839**, dated April 6, 1875; application filed March 12, 1875.

To all whom it may concern:

Be it known that I, JOHN B. TAPSCOTT, of Clarksville, in the county of Montgomery, State of Tennessee, have invented new and useful Improvements in Fish-Bar Fastenings; and I do hereby declare that the following, taken in connection with the drawings which accompany and form a part of this specification, is a description of my invention, sufficient to enable those skilled in the art to practice it.

My improvement consists in a novel construction of key and slot for bolting together the fish-bars and rails of railways, the key being in two parts, and one or both having an inclined side, and the inner one having a shoulder or projection which enters the bolt-hole, and locking it against accidental displacement, the outer part being, when in place, bent at one end to prevent its getting dislodged, the bolt having its slot of a length to admit both parts and the shoulder, and also having adjacent to its head a shank of elliptical or other form, to prevent the bolt from turning and to preserve the key in a vertical position.

Figure 1 is a cross-section of a rail and of my improved devices applied thereto; Fig. 2, a top view of one of the bolts; Fig. 3, the two parts of the key, and edge view of the inner one; Fig. 4, an end view of the bolt and keys, the rail and fish-plates not being displayed; Fig. 5 shows a modification of the keys.

A A′ are the two parts of my improved key, having the faces *c d*, when they come in contact, inclined as shown, so that the two together form a parallelogram, with a shoulder, *e*, projecting from the inner one, for a purpose hereinafter mentioned. The bolts are each made with a slot, *f*, as long as the breadth of both parts, including the shoulder; and next adjacent to and just under its head they have an elliptical form of shank shown at *i*, designed to fit in a similarly-shaped cavity or depression in the outer side of one of the fish-plates.

It will now be seen that when the bolt is in its position to secure the fish-plates to the rail, and the part A′ placed in the slot of the bolt, and its projection lodged in the bolt-hole in the fish-plate, the slot giving it about a quarter of an inch play, then the part A of the key being placed in the slot and driven to its place, the fish-plates or bars G are forced against the neck of the rail on each side, and the projection or shoulder *e* driven home in the bolt-hole and slot, after which the key is held fast to its place by bending the end of the part A, as shown at *h*, the elliptical or other equivalent part *i* of the head of the bolt being at the same time firmly and immovably lodged in the cavity *x′* in the fish-plate, and preventing any change in the vertical position of the key. The shoulder *e* prevents any up and down motion of the key. There is thus an entire security against the fastening being forced from its place by the concussions or oscillations of running trains.

It will be perceived that no washers are used or needed.

Instead of having the adjacent faces or edges of the parts A and A′ inclined they may be vertical or parallel with the inner face of A′, as shown at *x x*, Fig. 5; but in such case the outer face or edge *l* should be inclined, as shown in Fig. 5.

I claim—

In combination with the fish-bars and bolts, the key, made in two parts, A A′, one having a shoulder, *e*, and one or both having an inclined face, when applied and operating substantially as and for the purposes set forth.

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Witnesses:

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