

(No Model.)

W. T. ARMSTRONG & G. H. WADSWORTH.
METALLIC TIE AND RAIL FASTENER.

No. 518,439.

Patented Apr. 17, 1894.

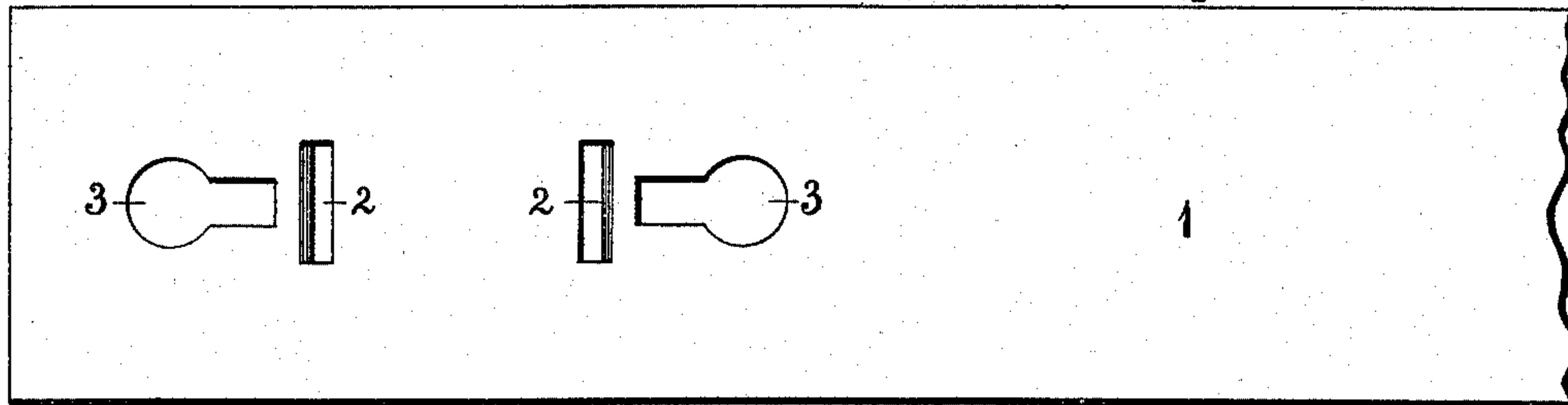


FIG. 1.

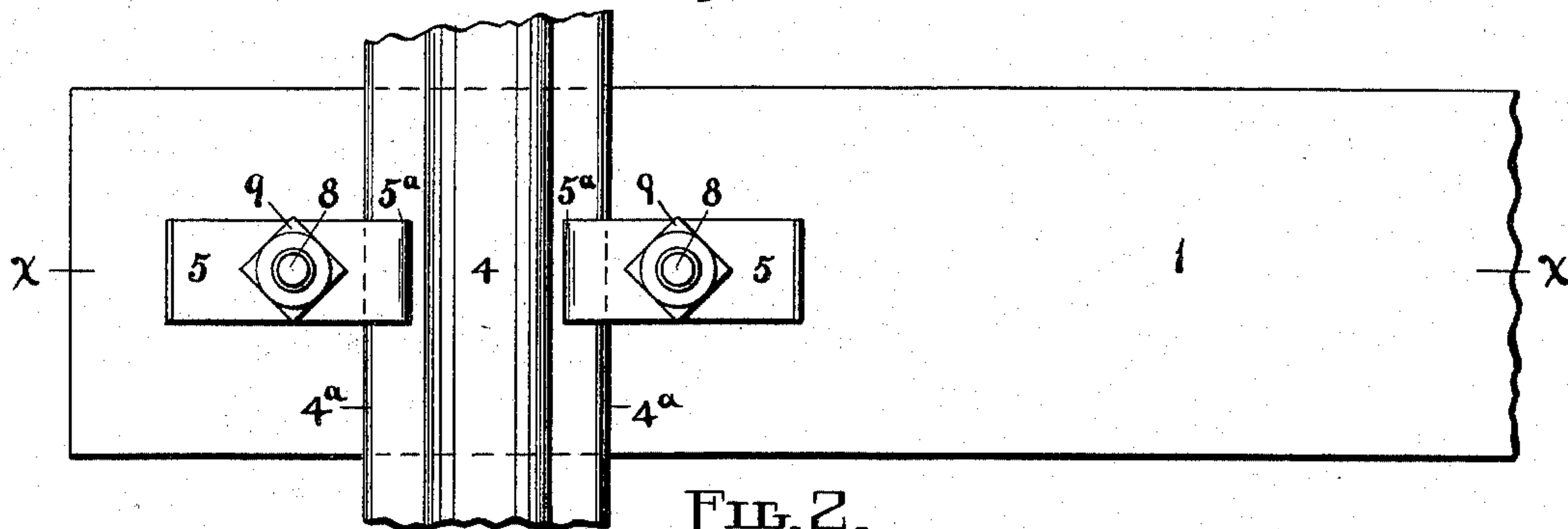


FIG. 2.

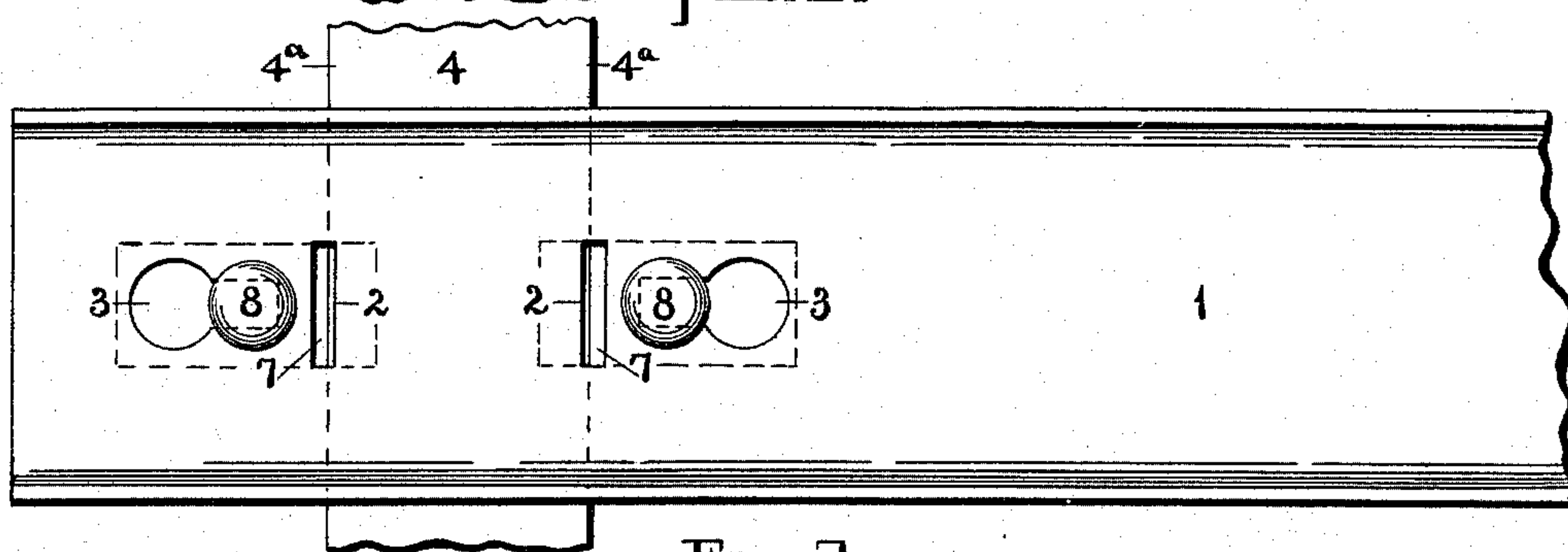


FIG. 3.

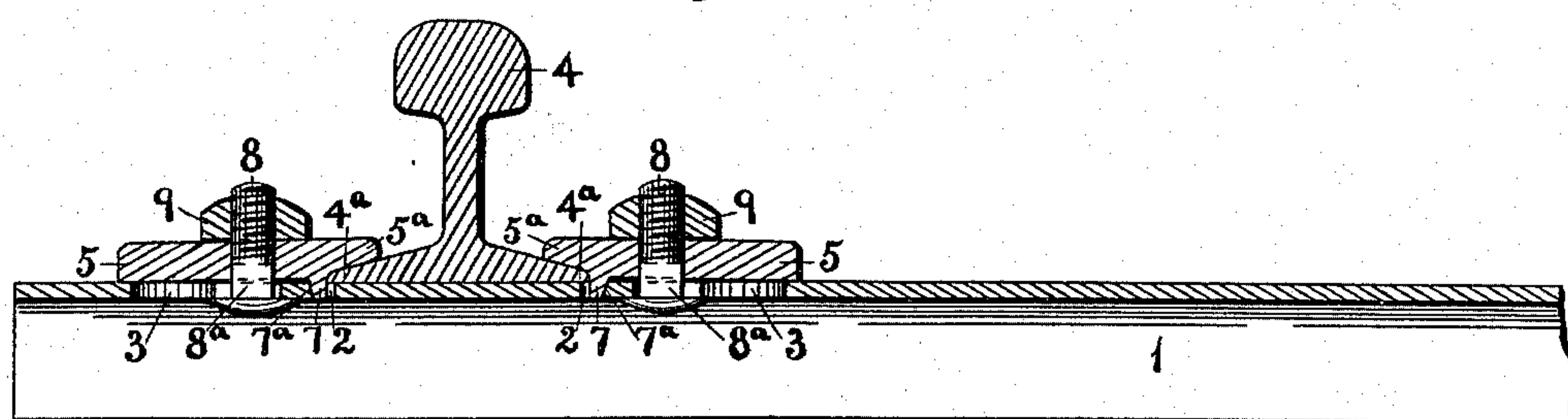


FIG. 4.

WITNESSES:

J. H. Graham
L. H. Wain

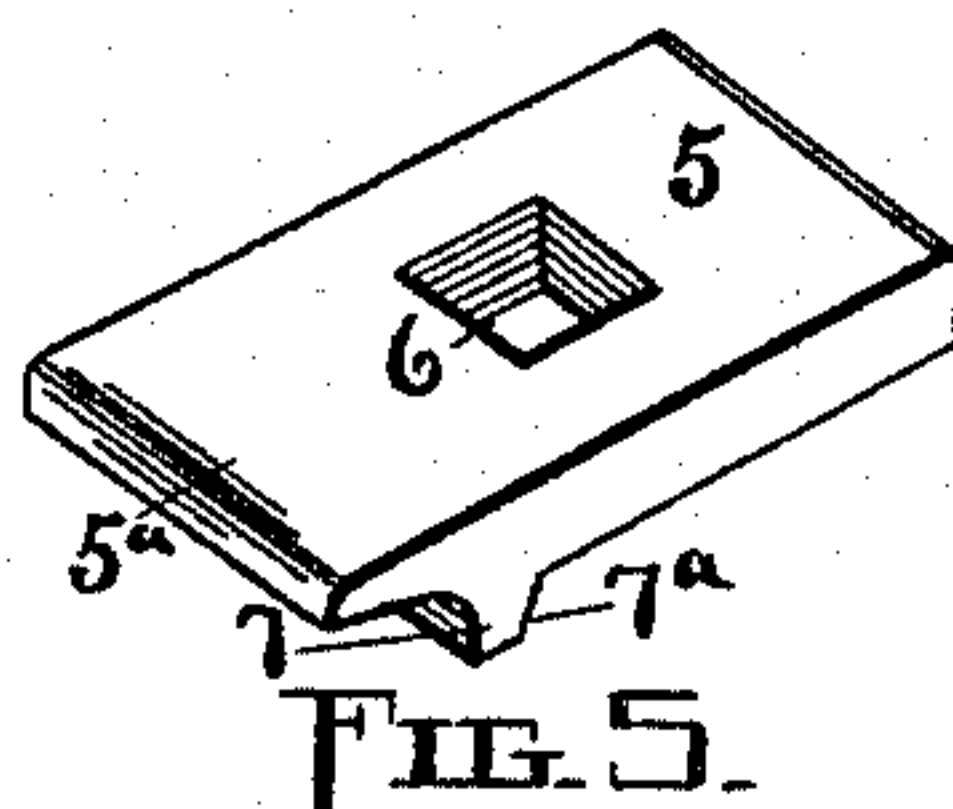


FIG. 5.

INVENTORS:

W. T. Armstrong
and
G. H. Wadsworth,
by Burridge & Leutter,
attys.

UNITED STATES PATENT OFFICE.

WILLIAM T. ARMSTRONG AND GEORGE H. WADSWORTH, OF CLEVELAND,
OHIO.

METALLIC TIE AND RAIL FASTENER.

SPECIFICATION forming part of Letters Patent No. 518,439, dated April 17, 1894.

Application filed November 11, 1893. Serial No. 490,621. (No model.)

To all whom it may concern:

Be it known that we, WILLIAM T. ARMSTRONG and GEORGE H. WADSWORTH, citizens of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Metallic Tie and Rail Fasteners, of which the following is a full, clear, and exact description.

Our invention consists of a perforated dog having a depending lug, beveled on the back, and adapted to be received into a slot in the metallic tie, said dog being held in place, with its nose over the flange of the rail, by means of a nut and a bolt which passes through an elongated opening in said tie and the hole in said dog.

The object of our improvement is to provide a cheap, durable and easily adjusted fastener for securing rails to metallic ties.

That our invention may be seen and fully understood by others, reference will be had to the following specification and annexed drawings forming a part thereof, in which—

Figure 1 is a top view of a tie showing the slots and the elongated openings for a pair of dogs; Fig. 2, a top view of a rail secured to a tie by our device; Fig. 3, a bottom view of the same; Fig. 4, a longitudinal section on line *x*, Fig. 2, and Fig. 5, a perspective view of one of the dogs.

Similar figures of reference designate like parts in the drawings and specification.

The metallic tie 1 is provided with the slots 2, 2 and the elongated openings 3, 3. The rail 4 rests upon the tie 1, between the slots 2, 2, and the flanges 4^a, 4^a of said rail extend slightly over the inner margins of said slots. The dogs 5, 5, of iron or other suitable material, have the square holes 6 and the depending lugs 7, the backs of said lugs being beveled, as shown at 7^a, from above, downward and forward. Each of the dogs 5 terminates at the front in the nose 5^a. The round-headed bolt 8 has the square part 8^a which fits the hole 6, in the dog 5, and is provided with the nut 9. The outside edge of each of the tie slots 2, 2 is beveled to conform to the beveled side 7^a of the dog lug 7.

To secure the rail 4 to the tie 1, place said rail in position on the top of said tie so that

the flanges 4^a, 4^a slightly overlap the inner margins of the slots 2, 2, as before stated. Pass the bolts 8, 8 through the holes 6, 6 in the dogs 5, 5, from the bottom, and thread the nuts 9, 9 onto said bolts. Insert the heads of the bolts 8, 8 through the enlarged portions of the openings 3, 3, said bolt-heads being a little less in diameter than said enlarged portions, and draw the dogs 5, 5 toward the rail 4 until the lugs 7, 7 enter the slots 2, 2. At the same time the bolts 8, 8 will pass into the contracted portions of the openings 3, 3 and the bolt-heads will bear on the under side of the tie 1. With a wrench, screw the nuts 9, 9 tightly down onto the dogs 5, 5 and, owing to the beveled lugs 7, 7, said dogs are forced against the edges of the rail flanges 4^a, 4^a while the noses 5^a, 5^a are drawn down onto the tops of said flanges, holding said rail securely in place.

Some suitable lock-nut will be employed with the bolt 8 and when, for any reason, it becomes necessary to replace the same, simply break said nut, drive the bolt down into the ground, remove the dog 5, insert a new bolt therein and replace said dog, as before described.

The rail flanges 4^a, 4^a overlap the slots 2, 2 in order to allow the dog lugs 7, 7 to bear directly against the edges of said flanges. It will be readily seen, from the foregoing description, that there can be no lateral or longitudinal movement whatever to the dogs 5, 5, after the nuts 9, 9 are securely screwed into place. The slots 2, 2 and the elongated openings 3, 3 are duplicated at the opposite end of the tie 1, for the accommodation of the other rail, but it has not been deemed necessary to encumber the drawings with an illustration of the same.

What we claim as our invention, and desire to secure by Letters Patent, is—

1. In combination with a rail fastener, a metallic tie provided at each end with two slots having their outer edges beveled, adapted to co-operate with a clip or dog the distance between the inner edges of said slots being a little less than the width of the bottom of a rail, and two elongated openings outside of said slots, in the manner substantially as and for the purpose set forth.

2. In combination with a metallic tie and rail fastener, a dog terminating in a forward projecting nose and having a square hole therein, an integral lug, beveled at the back, depending from the bottom of said dog near the front, and adapted to co-operate with the wedging wall of the tie, a bolt provided with a square body between the head and thread, and a nut, in the manner substantially as and for the purpose set forth.

3. In a metallic tie and rail fastener, a tie provided with slots and elongated openings, and a rail on said tie slightly overlapping said slots, in combination with one or more perforated dogs terminating in projecting noses adapted to overlie the flanges of said rail, in-

tegral lugs beveled at the back and depending from said dogs, said lugs adapted to engage with said slots, bolts having square bodies, and nuts, said bolts being passed through square holes in said dogs and arranged to enter the enlarged portions of said tie openings and slide into the contracted portions of the same with the heads bearing on the under side of said tie, substantially as specified.

In testimony whereof we affix our signatures in presence of two witnesses.

WILLIAM T. ARMSTRONG.

GEORGE H. WADSWORTH.

Witnesses:

F. A. CUTTER,

L. A. STRATTON.