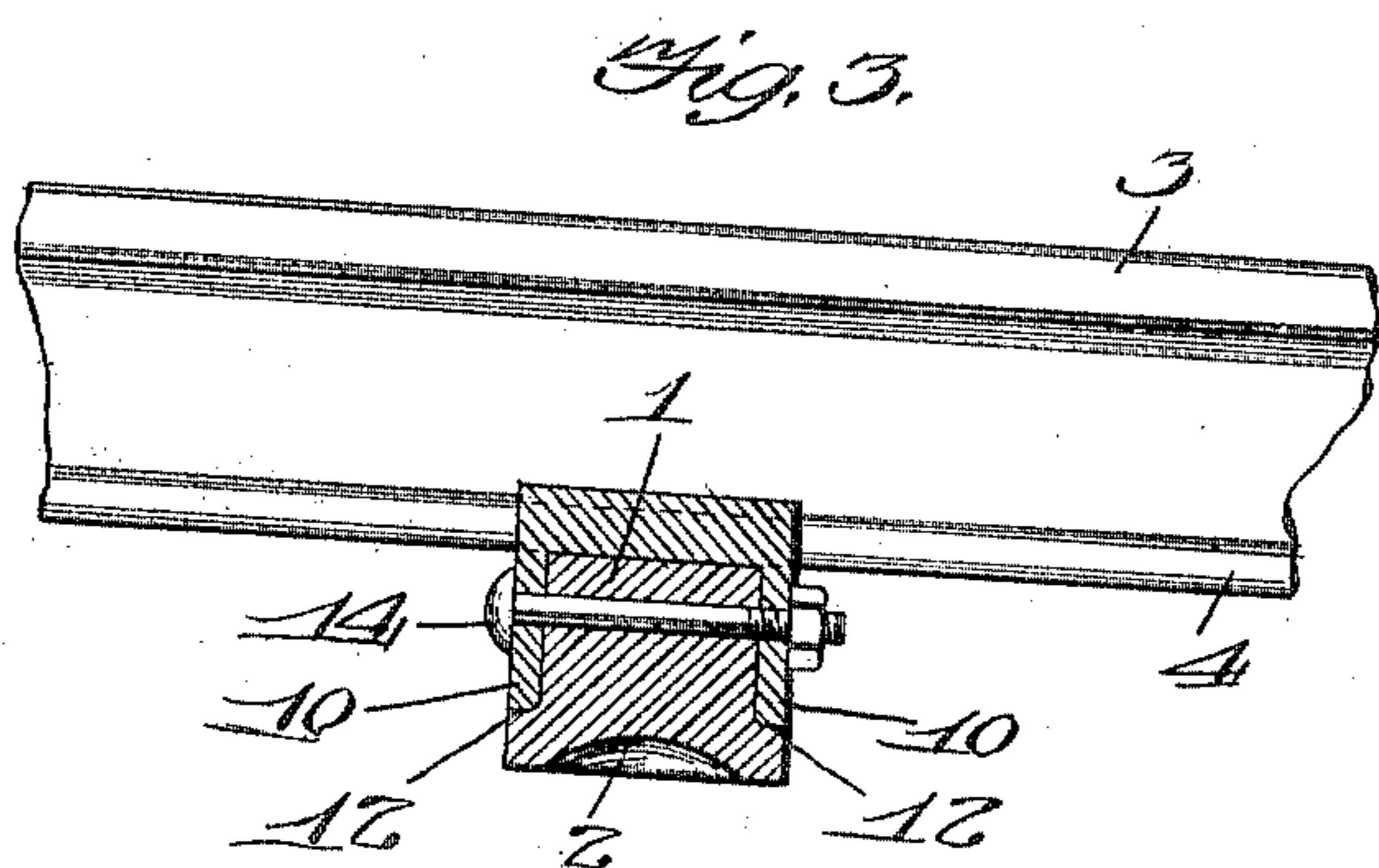
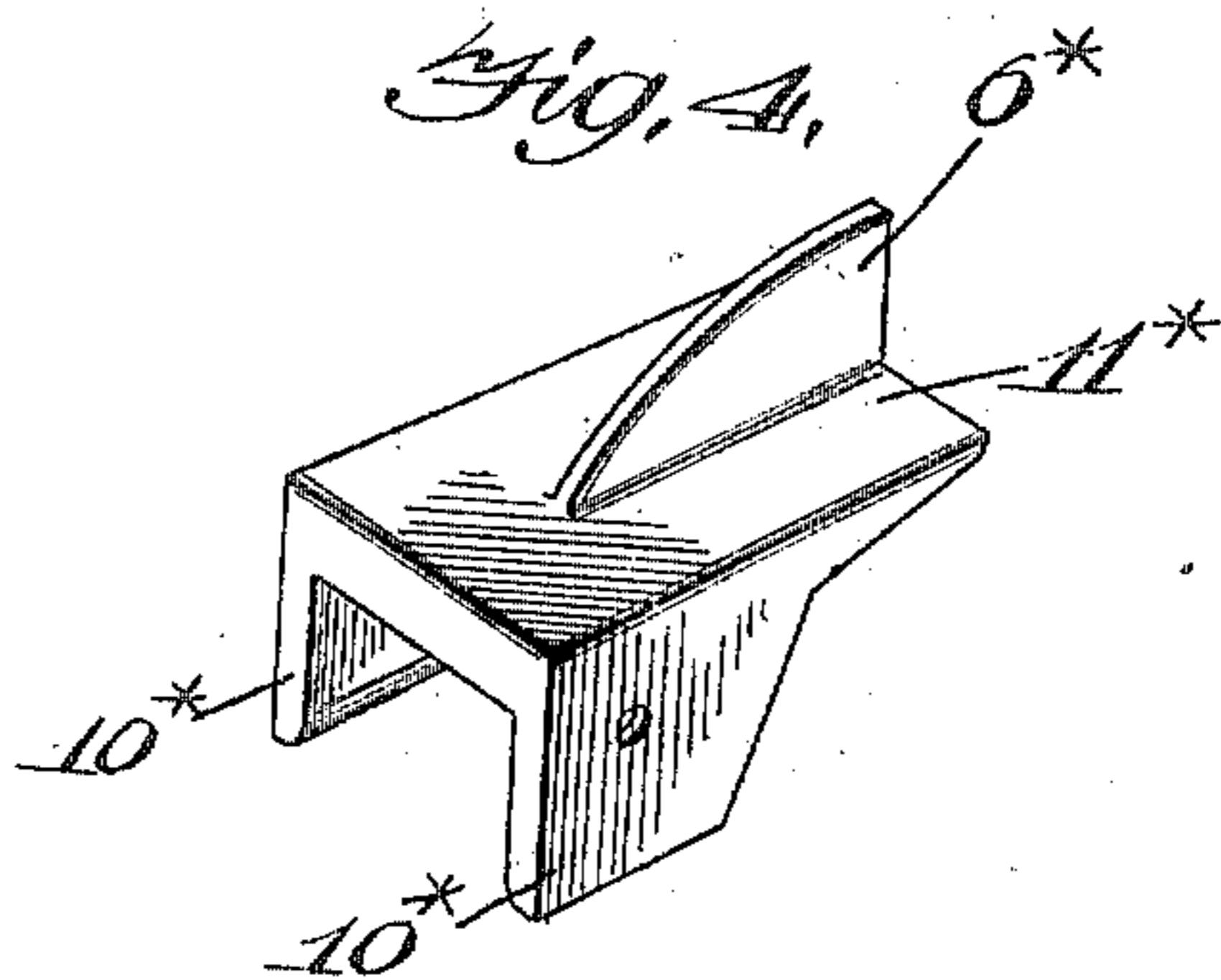
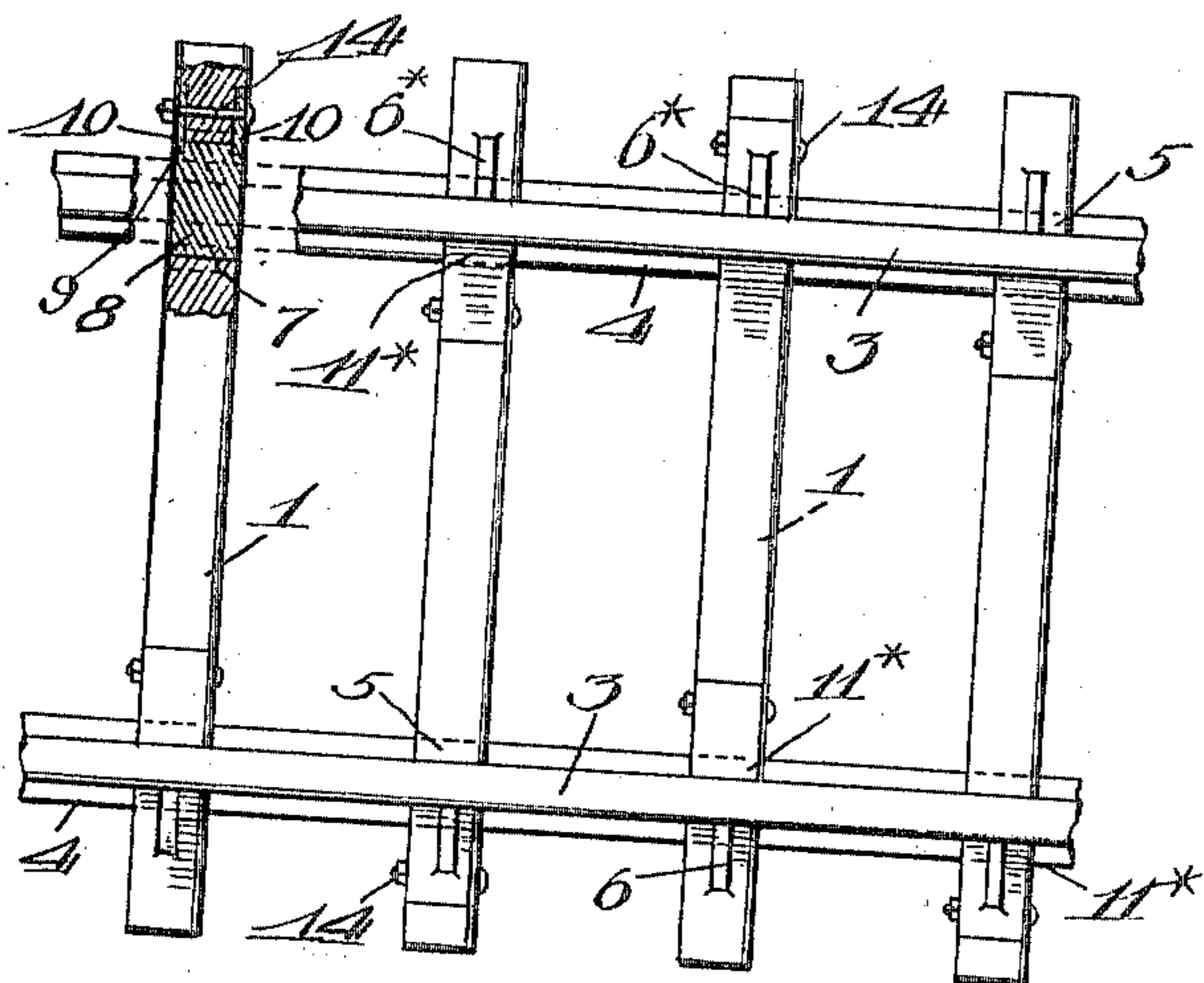
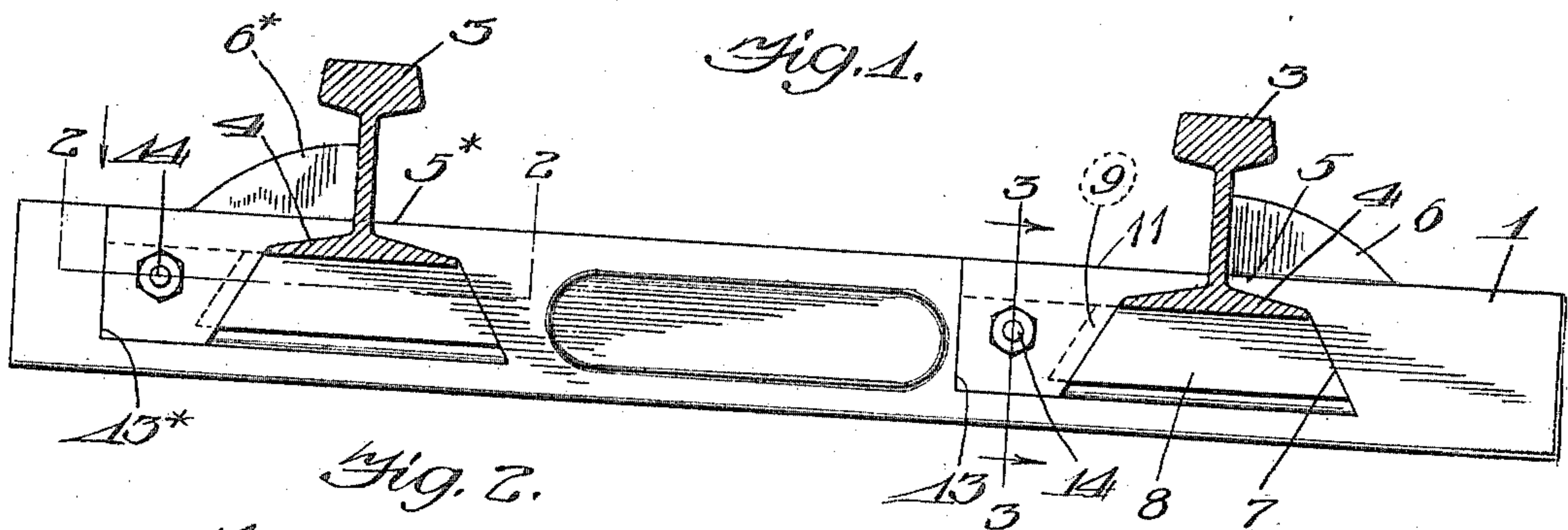


No. 816,950.

H. W. TAYLOR & D. M. RUSSELL.
RAILROAD TIE.

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Witnesses:
 J. D. Perry
 Robert McVie

Inventors
N.W. Taylor
do M. Russell
by Francis A. Hopkin
att'y

UNITED STATES PATENT OFFICE.

HENRY W. TAYLOR, OF AURORA, AND DULA M. RUSSELL, OF NAPERVILLE, ILLINOIS.

RAILROAD-TIE.

No. 816,950.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that we, HENRY W. TAYLOR, residing at Aurora, county of Kane, and DULA M. RUSSELL, residing at Naperville, county of Dupage, State of Illinois, citizens of the United States, have invented certain new and useful Improvements in Railway-Ties, of which the following is a full, clear, and exact specification.

Our invention relates more particularly to metallic railway-ties of the class in which cushions of wood or other material are placed beneath the rails and the rails are held to the ties by clamps secured to the ties and lips or flanges cast or formed on the ties and overlapping the flange of the rail; and our invention has for one of its important objects to provide an improved construction of railway-tie whereby the blocks may be readily removed and replaced by merely driving them endwise without lifting the rail or depressing the tie and when in position will be positively held in place, a further object being to utilize the same clamp which holds the rail for also holding the cushion-block.

With a view to the attainment of these ends and the accomplishment of certain other objects which will hereinafter appear the invention consists in certain features of novelty, which will now be described with reference to the accompanying drawings and more particularly pointed out in the claims.

In the said drawings, Figure 1 is a transverse sectional view of a railway-track embodying this invention. Fig. 2 is a plan view thereof, partly in section, on the line 2 2, Fig. 1. Fig. 3 is a cross-section on the line 3 3, Fig. 1; and Fig. 4 is a perspective view of one of the clamps.

1 is the tie proper, which is preferably cast in one piece and composed of metal or other suitable durable material, with the cup or cavity in the bottom thereof to prevent it from slipping, and 3 represents the rails of the usual construction, provided with foot-plates 4. One end of the tie 1 on the outer side of one of the rails is formed with a solid or integral lip 5, which overlaps the flange 4 and which may be flush with the general level of the tie or which may be formed with a rib or brace 6, bearing against the web of the rail where used on curves to prevent the rail from tipping outwardly. Adjacent to this lip 5 the tie is formed with a dovetailed passage or

recess 7, in which is situated a dovetailed block 8, or this passage and block may be given any other suitable form that will serve to hold the blocks snugly in place against vertical movement. The block 8 is composed of wood or other suitable yielding material and constitutes a cushion for the direct support of the rail to prevent an objectionable rigidity which would otherwise exist where the metallic ties were situated. One side of the block is rabbeted, as shown at 9, at both ends, and lapping over the rabbeted portions are two flanges 10, one on each side of the tie, which are formed on and secured to a clamp 11, which, like the lip 5, projects over and fits against the flange 4 on the opposite side of the rail to the lip 5. These flanges 10 are also rabbeted or let into the sides of the tie, as shown at 12, so as to make them flush with the sides of the tie, and at the same time afford shoulders against which their vertical edges abut, and thereby hold the clamps against rotary action, while they are held down by transverse bolts 14, passing through the flanges 10 and the body of the tie. By this means it will be seen that the ends of the cushion-block 8 are embraced by the flanges 10, and the block is thereby rigidly and positively held in place against endwise movement; but when the clamp is removed the block may be readily driven out longitudinally and replaced by a new one when desired without either lifting the rail or depressing the tie, consequently without disturbing the road-bed or affecting the alinement of the rails. It will also be seen that the upper surface of the clamps 11, where they occur on the inner sides of the rails, are entirely flush with the level of the body of the tie and free from projecting bolts, spikes, or other objects which are objectionable in that they form means for the engagement of drooping brakes, beams, rods, and other dislocated parts of the rolling-stock.

In Fig. 1 of the drawings the construction is shown to be such that the solid or integral lip 5 for one of the rails occurs on the outer side, while the solid lip for the other rail, which lip is indicated at 5*, occurs on the inner side, and the removable clamp for the outer side of the latter rail is provided with a rib or brace 6* and is otherwise the same in construction, arrangement, and operation

as the clamp 11, the lip of the clamp being indicated at 11*, its flange at 10*, and the shoulder against which the vertical edges of the flanges rest at 13. It is also apparent
5 from Fig. 2 that the ties thus constructed may be alternately turned end for end, so that the integral lip 5 will alternately occur on opposite sides of the track, and there-
10 by provide the rails with means other than the removable clamps 11 11* for preventing them from spreading.

Having thus described our invention, what we claim as new therein, and desire to secure by Letters Patent, is—

15 1. In a railway-tie the combination of the body of the tie provided with recesses in the upper side thereof and having rigid lips overhanging said recesses, cushion-blocks situated in said recesses, rails having flanges lo-
20 cated in said recesses upon said blocks and beneath said lips, said blocks being movable longitudinally lengthwise of the rails in the spaces beneath the bottoms of the rails and above the bottoms of the recesses and while
25 seated in the bottoms of said recesses, whereby they may be driven out without lifting

the rails or depressing the tie, and removable positive holding means for holding the blocks against longitudinal movement.

2. In a railway-tie the combination of the 30
body of the tie having recesses provided with overhanging lips, blocks situated in said recesses, rails having flanges situated in the recesses upon said blocks and beneath said lips, and clamps secured to the sides of the 35
body of the tie and overlapping the ends of said blocks for holding them against longitudinal movement.

3. In a railway-tie the combination of the body of the tie having recesses and over- 40
hanging lips, cushion-blocks situated in said recesses, the rails having flanges arranged in said recesses upon said blocks and beneath said lips, and clamps having side flanges se- 45
cured to the sides of the body of the tie and overlapping the ends of said blocks, and lips overlapping the flanges of the rails.

HENRY W. TAYLOR.
DULA M. RUSSELL.

Witnesses:

FRANCIS A. HOPKINS,
A. M. UHER.