

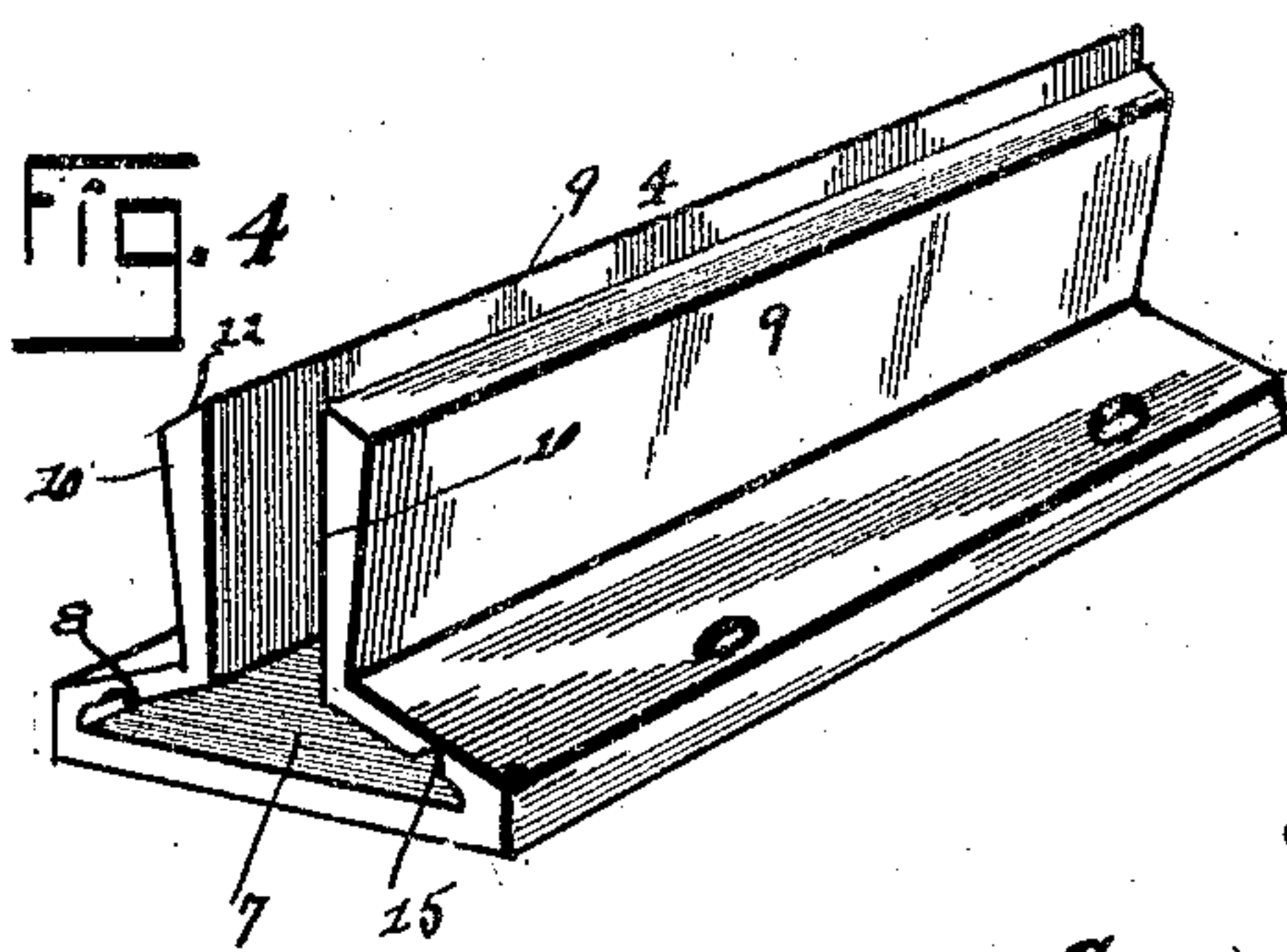
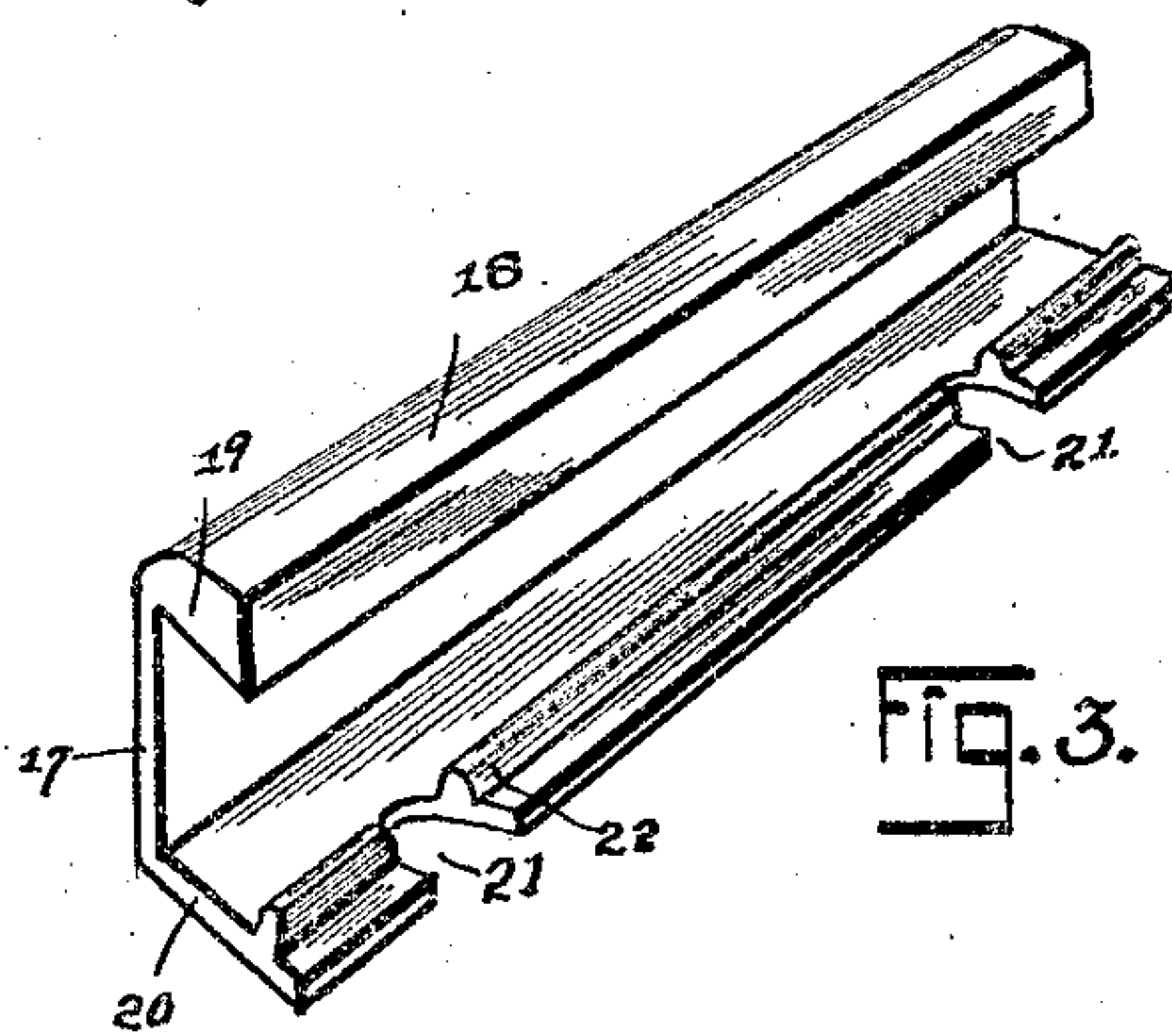
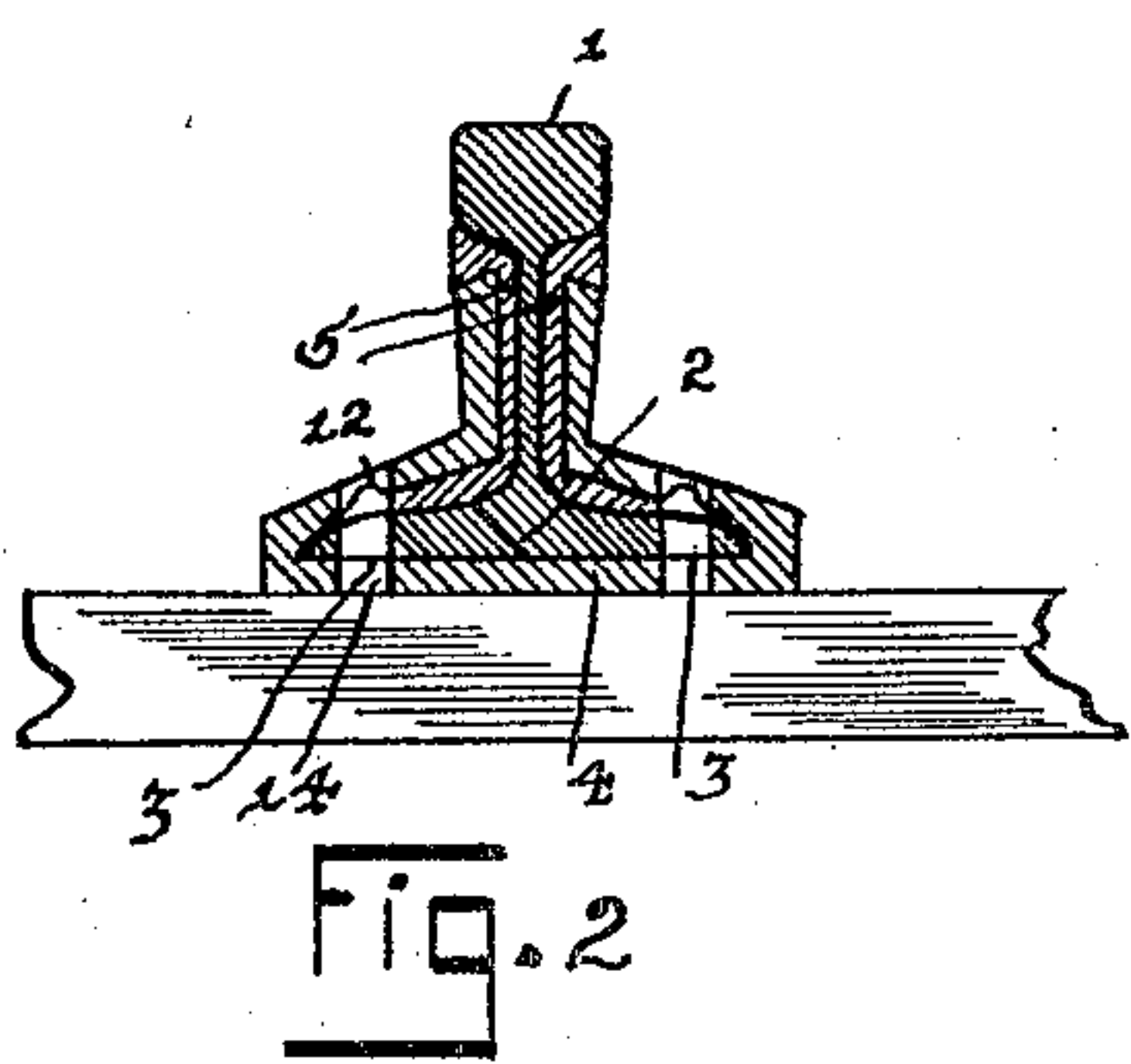
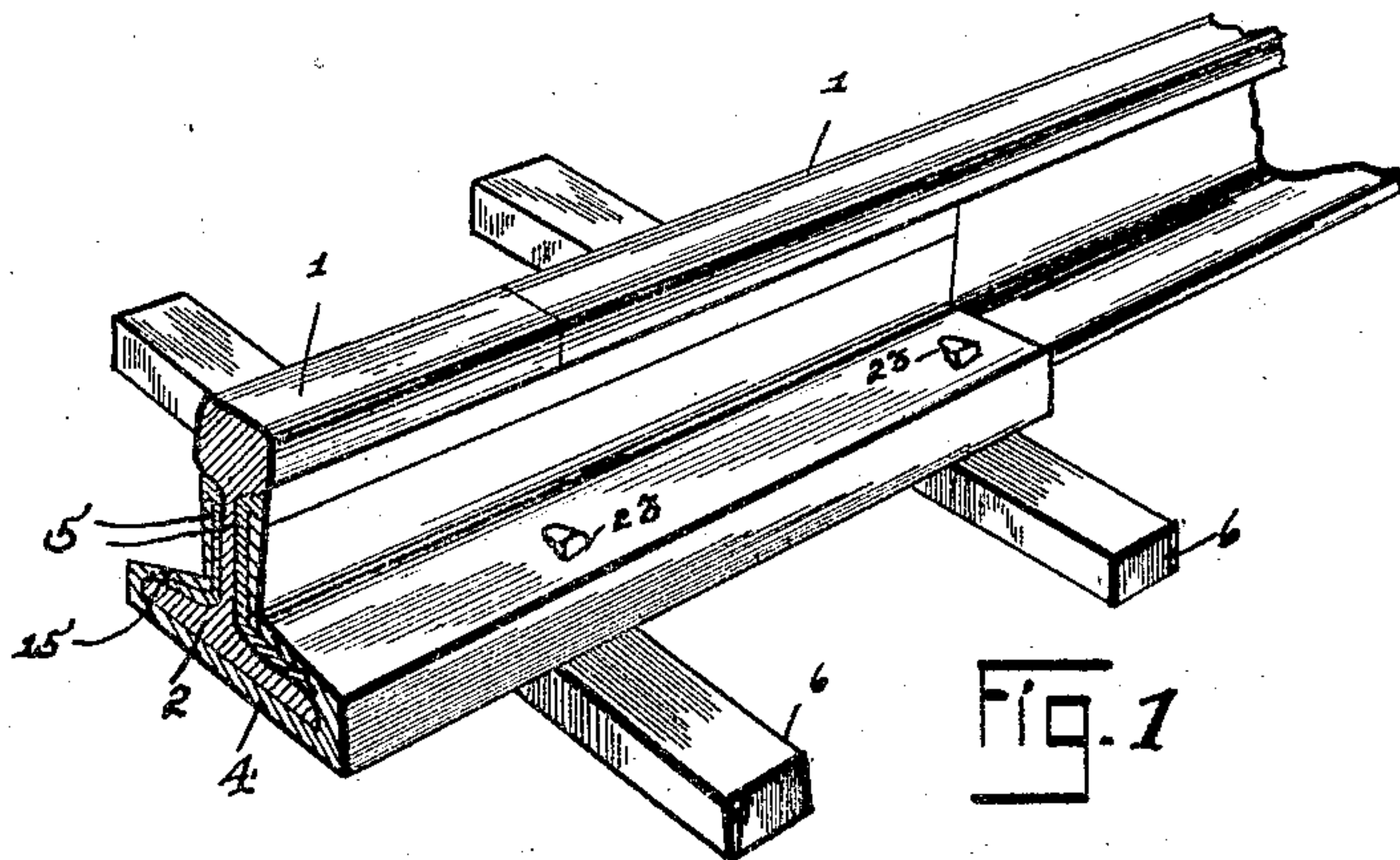
No. 819,502.

PATENTED MAY 1, 1906.

S. A. BEELER.

RAIL JOINT.

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UNITED STATES PATENT OFFICE.

SAMUEL A. BEELER, OF WASHINGTON, PENNSYLVANIA.

RAIL-JOINT.

No. 819,502.

Specification of Letters Patent.

Patented May 1, 1906.

Application filed November 3, 1905. Serial No. 285,733.

To all whom it may concern:

Be it known that I, SAMUEL A. BEELER, a citizen of the United States of America, residing at Washington, in the county of Washington and State of Pennsylvania, have invented certain new and useful Improvements in Rail-Joints, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention relates to certain new and useful improvements in rail-joints; and the invention has for its primary object the provision of novel means for firmly retaining the confronting ends of two sections of rails upon ties or the like foundation.

15 Another object of this invention is to dispense with the use of nuts and bolts in connection with rail-joints and to employ novel means for retaining fish bars or plates in engagement with the rail ends, whereby the rails cannot become displaced relatively to one another.

25 With the above and other objects in view, which will more readily appear as the nature of the invention is better understood, the same consists in the novel construction, combination, and arrangement of parts to be hereinafter more fully described and claimed.

30 Referring to the drawings accompanying this application, like numerals of reference designate corresponding parts throughout the several views, in which—

35 Figure 1 is a perspective view of my improved rail-joint. Fig. 2 is a vertical sectional view of the same. Fig. 3 is a perspective view of one of the fish bars or plates, and Fig. 4 is a perspective view of a novel form of chair used in connection with the rail-joint.

40 To put my invention into practice, I employ two rails 1 1 of a conventional form, and adjacent to the confronting ends of these rails I provide the base-flanges 2 with openings 3 3 near their outer edges.

45 A chair 4 and fish-bars 5 5 are employed for retaining the ends of the rails 1 1 together upon ties 6 6 or the like foundation. The chair 4 consists of a base-plate 7, upon which the rails 1 1 are adapted to seat, and the edges of the base-plate 7 are provided with inwardly-extending inclined flanges 8 8, adapted to overlie the base-flanges 2 of the rails. The flanges 8 8 extend upwardly, forming web-flanges 9 9, the upper edges of which are enlarged, as at 10 10, and beveled, as at 11 11. The flanges 8 8 and the base-plate 7 adjacent to the ends of the chair are pro-

vided with vertically-disposed openings 12 12 and 14 14, the openings 12 12 of the flanges 8 8 alining vertically with the openings 14 14 of the base-plate 7. The underneath faces 60 of the flanges 8 8 adjacent to the base-plate 7 are provided with longitudinally-disposed grooves 15 15, the object of which will be presently described.

65 The fish bars or plates 5 are identical in construction. Therefore I deem it only necessary to describe one of said fish-bars, which is clearly illustrated in Fig. 3 of the drawings. Each fish-bar consists of a web portion 17, the upper edge of which is provided with a head-flange 18, having an underneath beveled surface 19, corresponding in angularity to the upper beveled edge 11 of the web-flanges 9 of the chair. The lower edge of the web portion 17 of the fish-bar 5 is provided 75 with a base-flange 20, said flange having its edge cut away, as at 21, adjacent to each end thereof, the cut-away portion of the base-flange 20 being adapted to vertically aline with the openings 12 and 14 when the fish-bars are positioned upon the rails 1 1 within the chair 4. The base-flange 20 of the bar 5 adjacent to its edge is provided with a longitudinally-disposed rib 22, which engages the groove 15 of the chair 4. 85

To assemble the different parts of my improved rail-joint, the rails 1 1 are first positioned within the chair 4, the openings 3 of the rails 1 1 alining with the openings 12 and 14 of the chair. The fish bars or plates 5 5 90 are now moved endwise into engagement with the rails 1 1 and the chair. The fish bars or plates are adapted to slide in between the web-flanges 9 of the chair and the web portions of the rails 1 1, the head-flanges 18 95 of the fish-bars resting upon the upper beveled edges 11 of the chair, while the ribs 22 of the fish-bars engage in the grooves 15 of the chair. The fish bars or plates are adapted to embrace the top surface of the base-flanges 100 2 of the rails 1 1, the web portions of said rails, and the heads of said rails, while the web-flanges and the base-plate 7 of the chair support said fish-bars and firmly retain the rails 1 1 in close proximity to one another. 105

Spikes 23 23 of a conventional form are adapted to pass through the openings 12 12 and 14 14 and the openings 3 3 of the rails 1 1 to retain the chair and rails in engagement with the ties 6 6 or the like foundation. 110

It will be observed that when my improved rail-joint is assembled it will be impossi-

ble for one section of rail to become later-
ally displaced independently of the other
section, and in this manner I have aimed to
form practically a continuous tread for the
5 rails 1 1, it being impossible for one rail to
move vertically independently of the other
rail, thereby dispensing with the jar hereto-
fore incurred by rolling-stock passing over
the rails.

10 My improved rail-joint is preferably made
of strong and durable material capable of
withstanding rough usage to which it is sub-
jected, and such changes in the size, propor-
tion, and minor details of the invention as
15 are permissible by the appended claims may
be resorted to without departing from the
spirit and scope of the invention.

What I claim, and desire to secure by Let-
ters Patent, is—

20 1. The combination with ties and rails
adapted to be supported upon said ties, of a
chair supporting said rails, flanges carried by
said chair and extending over the top of the
base of the rail and upwardly adjacent the
25 web of the rail, said flanges having longitu-
dinally-disposed grooves formed therein, fish-
bars adapted to fit within said chair and em-
brace the web portions of said rails, said fish-

bars having ribs fitting in the grooves in the
chair means to lock said fish-bars and rails 30
in engagement with said chair and said foun-
dation, substantially as described.

2. In a rail-joint, the combination with
two sections of rails, the base-flanges of said
rails having openings formed therein, of a 35
chair having flanges extending over the base-
flanges of the rails and upwardly adjacent
the webs of the rails and adapted to embrace
said rails, said chair having vertically-dis-
posed alining openings formed therein adapt- 40
ed to register with the openings of the base-
flanges of said rails, fish-bars mounted in said
chair and adapted to embrace the sides of
said rails said fish-bars being formed at their
upper edges with laterally-extending head- 45
flanges engaging the upper edges of the ver-
tical portions of the flanges of the chair ribs
carried by said bars and engaging said chair,
means to lock said rails, fish-bars and chair
together, substantially as described. 50

In testimony whereof I affix my signature
in the presence of two witnesses.

SAMUEL A. BEELER.

Witnesses:

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MINNIE A. LEONARD.