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PATENTED DEC. 26, 1905.

C. B. BARTON & C. LAMOREAUX.

RAIL JOINT.

APPLICATION FILED MAY 27, 1905.

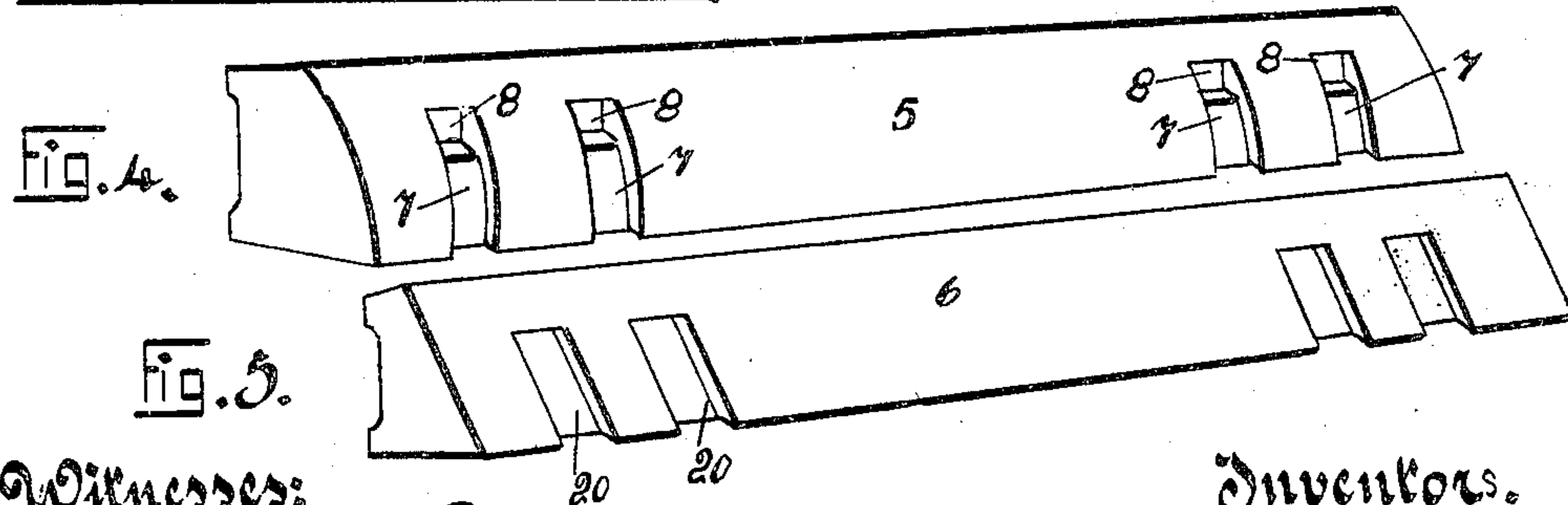
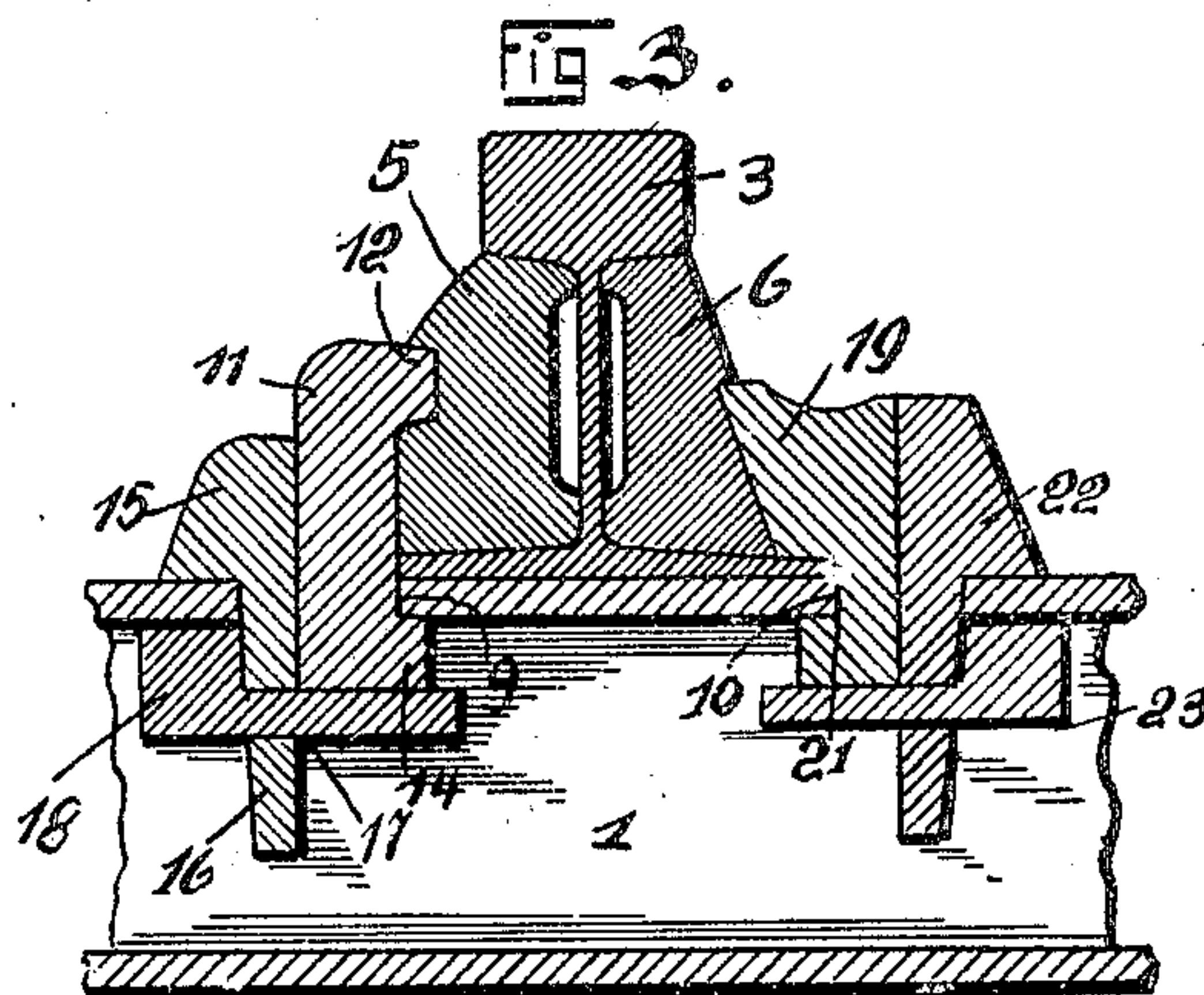
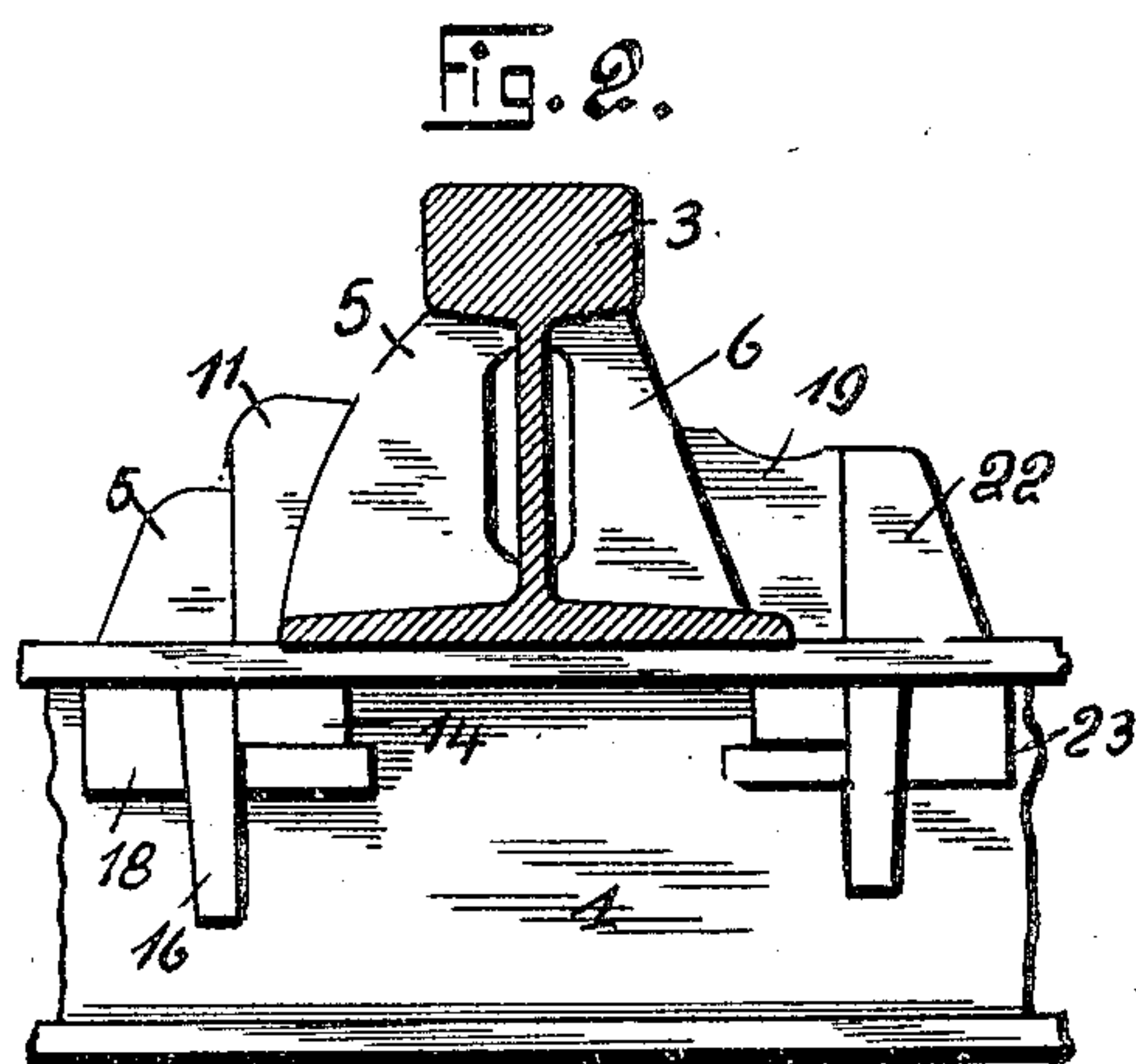
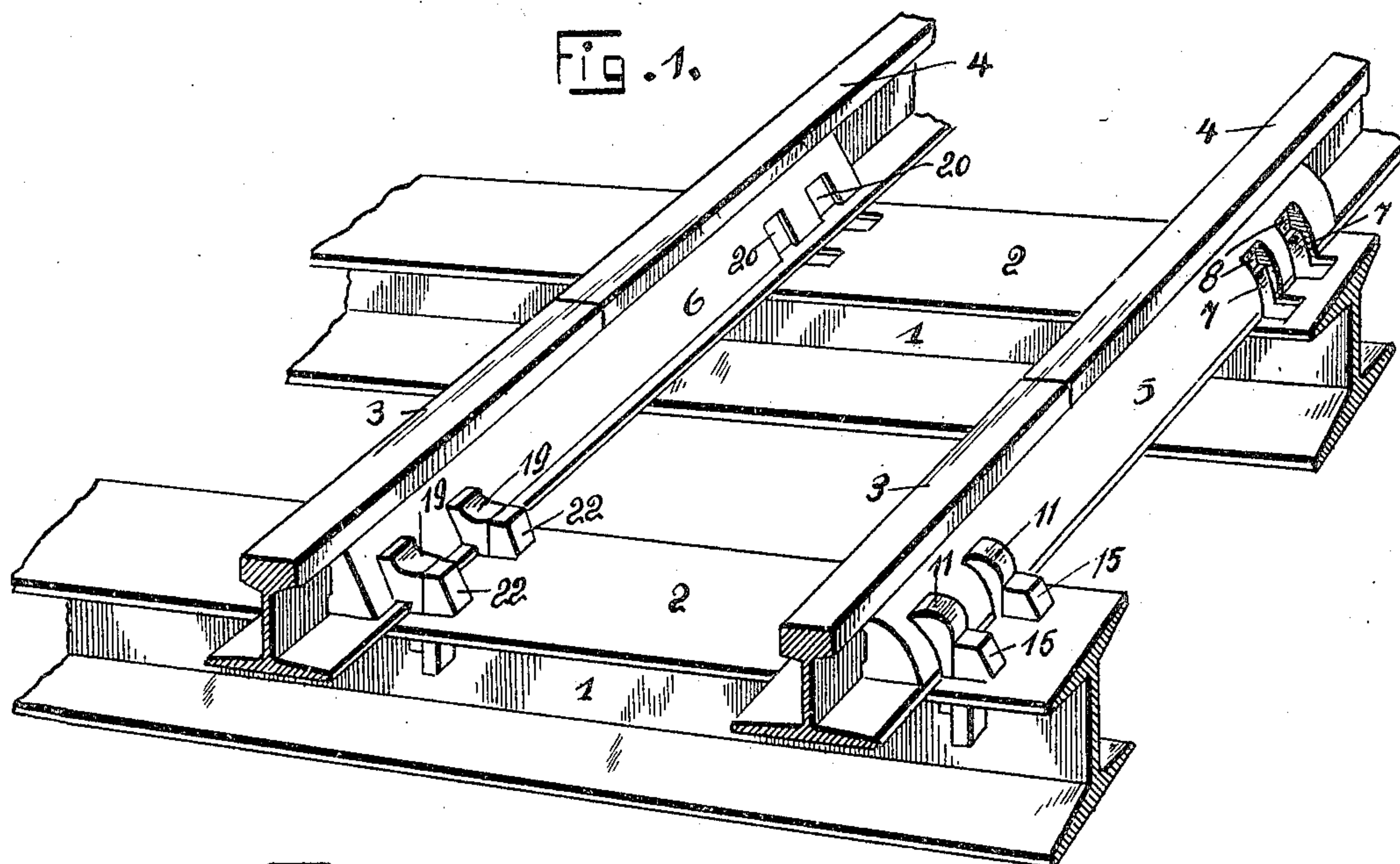


Fig. 5.

Witnesses:

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# UNITED STATES PATENT OFFICE.

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## RAIL-JOINT.

No. 808,503.

Specification of Letters Patent.

Patented Dec. 26, 1905.

Application filed May 27, 1905. Serial No. 262,566.

*To all whom it may concern:*

Be it known that we, CHARLES B. BARTON and CHARLES LAMOREAUX, citizens of the United States of America, residing at Glassport, in the county of Allegheny 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.

This invention relates to certain new and useful improvements in rail-joints; and the invention has for its object the provision of novel means for securing the confronting ends of two rail-sections together upon metallic ties.

Our invention aims to dispense with the use of nuts and bolts for securing fish-bars to sections of rails, also dispensing with the ordinary form of wooden tie heretofore used for supporting rails.

We have devised a novel form of fish-bar adapted to embrace the web portions of sections of rails, and in connection with the fish-bars we employ novel locking means for holding the fish-bars in engagement with rails and for holding the sections of rails in engagement with their supports.

The rail-joint as constructed by us is extremely simple in construction, strong and durable, comparatively inexpensive to manufacture, and highly efficient for the purposes for which it is used.

With the above and other objects in view the invention finally consists in the novel construction, combination, and arrangement of parts, which will be hereinafter more fully described and then specifically pointed out in the claims, and, referring to the drawings accompanying this application, like numerals of reference designate corresponding parts throughout the several views, in which—

Figure 1 is a perspective view of our improved rail-joint, illustrating two rails secured upon two ties, which are partly broken away. Fig. 2 is an end elevation of our improved rail-joint. Fig. 3 is a vertical sectional view of the same. Fig. 4 is a perspective view of one of the fish-bars, and Fig. 5 is a similar view of another fish-bar employed in connection with the rail-joint.

To put our invention into practice, we preferably employ metallic ties 1 1, which are substantially channel-shaped in cross-section,

and upon the top 2 of the tie we support and secure the rails 3 and 4. In Fig. 1 of the drawings we have illustrated two ties necessary to support our improved rail-joint, and in this instance the confronting ends of the rails 3 and 4 are preferably positioned between the ties, although the joint may be formed upon the top of one of the ties.

In securing the rails 3 and 4 together we employ fish-bars 5 and 6, adapted to engage the top of the base of the rails, the web portions thereof, and support the heads of the rails. The fish-bar 5 is made considerably heavier than the fish-bar 6, and this bar is intended to be used upon the outer sides of the rails in order to more firmly support the same. It is a well-known fact when rolling-stock is passing over the rails that they have a tendency to spread on account of the vibratory stresses and strains which are exerted upon the track by the rolling-stock. By making the fish-bars 5 considerably heavier than the fish-bars 6 a substantial support is provided to brace said rails. The outer sides of the fish-bars 5 are provided with grooves 7 7, the upper ends of which terminate in recesses 8 8. The tops of the ties are provided with openings 9 9 and 10 10 upon each side of the rail-sections, and in the openings 9 9 we mount blocks 11 11, having inwardly-extending lugs 12 and 14. The lugs 12 are adapted to engage in the recesses 8 of the fish-bars 5, while the lugs 14 are adapted to engage the underneath faces of the top portions 2 of the tie. To retain the block 11 in engagement with the fish-bar 5, we employ headed pins 15, the shank portions 16 of which extend down through the openings 9 9 of the ties and have apertures 17 formed therein through which keys 18 pass. The pins 15 are preferably wedge-shaped in order to force the blocks 11 into engagement with the fish-bars 5 when said pins are driven into the openings 9 of the ties.

The fish-bars 6 are held in engagement with the sections of rails by blocks 19, which are mounted in slots 20 20, formed in the sides of the fish-bars 6. These blocks are provided with grooves 21, adapted to embrace a portion of the ties and the base of a rail, and in order to hold the blocks 19 in engagement with the fish-bars 6 and the ties we employ substantially wedge-shaped pins 22, which are secured in the openings 10 by keys 23, simi-



lar in construction to the keys 18 heretofore described.

5 The openings 9 and 10 of the ties are only formed in such ties adjacent to where a joining of the rails is required, and it will of course be understood that these openings are made of a sufficient size to admit the blocks 11 and 19 in order that they may be placed in engagement with their respective fish-bars.

10 In connection with our improved rail-joint it will be observed that it is impossible for the fish-bars to become disengaged from the sections of rails unless the keys 18 and 23 and the pins 15 and 22 are removed, and even should 15 the keys become disengaged from their respective pins it would be impossible for the pins to become disengaged from the ties unless manually removed therefrom.

20 We do not care to confine ourselves to the specific shape of the ties, as other forms than that illustrated may be readily used.

It is thought from the foregoing that the construction, operation, and advantages of the herein-described rail-joint will be apparent without further description, and various 25 changes in the form, proportion, and minor details of construction may be resorted to without departing from the spirit of the invention or sacrificing any of the advantages thereof. 30

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

1. In a rail-joint of the character described,

the combination with metallic ties, the tops of said ties having openings formed therein, 35 rails, of fish-bars adapted to embrace said rails, said fish-bars having grooves formed therein, one of said fish-bars having recesses formed therein at the head of said grooves, blocks mounted in said openings and adapted 40 to engage said fish-bars, one of said blocks having a groove formed therein adapted to engage the top of said tie, substantially wedge-shaped pins mounted in said openings and adapted to hold said blocks in en- 45 gagement with said bars, said pins having openings formed therein, keys secured in said openings beneath the tops of said ties, substantially as and for the purpose described.

2. In a rail-joint of the character described, 50 the combination with metallic ties and rails, of fish-bars adapted to embrace said rails, blocks mounted in said metallic ties and adapted to engage said fish-bars, substantially wedge-shaped pins mounted in said ties and 55 adapted to engage said blocks, and means carried by said pins to prevent their displacement, substantially as described.

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

CHARLES B. BARTON.  
CHARLES LAMOREAUX.

Witnesses:

H. C. EVERT,  
WM. C. HEITZ.