

W. A. KEATON & A. PEARY.  
RAILWAY RAIL BRACE.  
APPLICATION FILED APR. 19, 1910.

998,011.

Patented July 18, 1911.

2 SHEETS—SHEET 1.

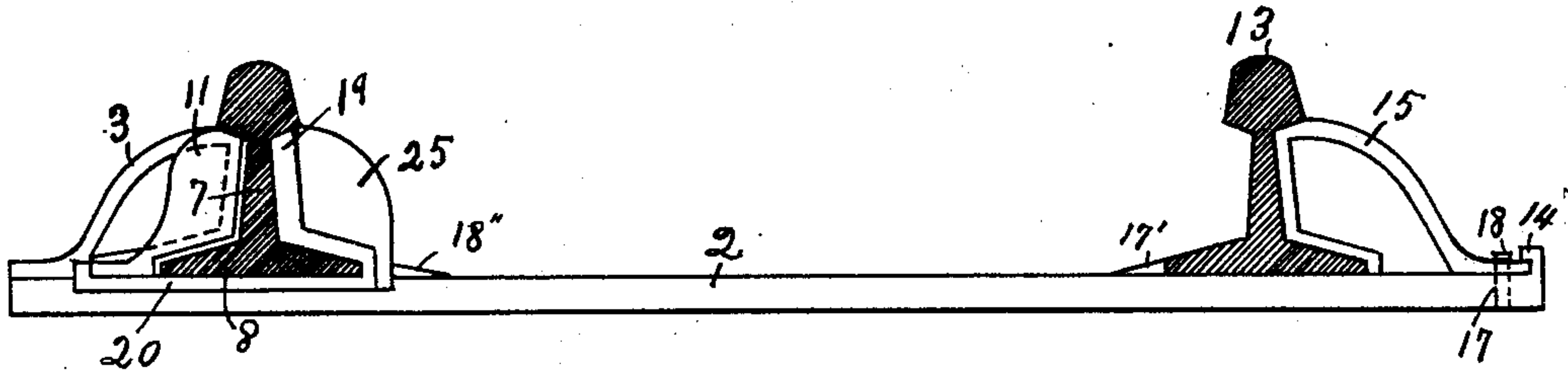


Fig 2

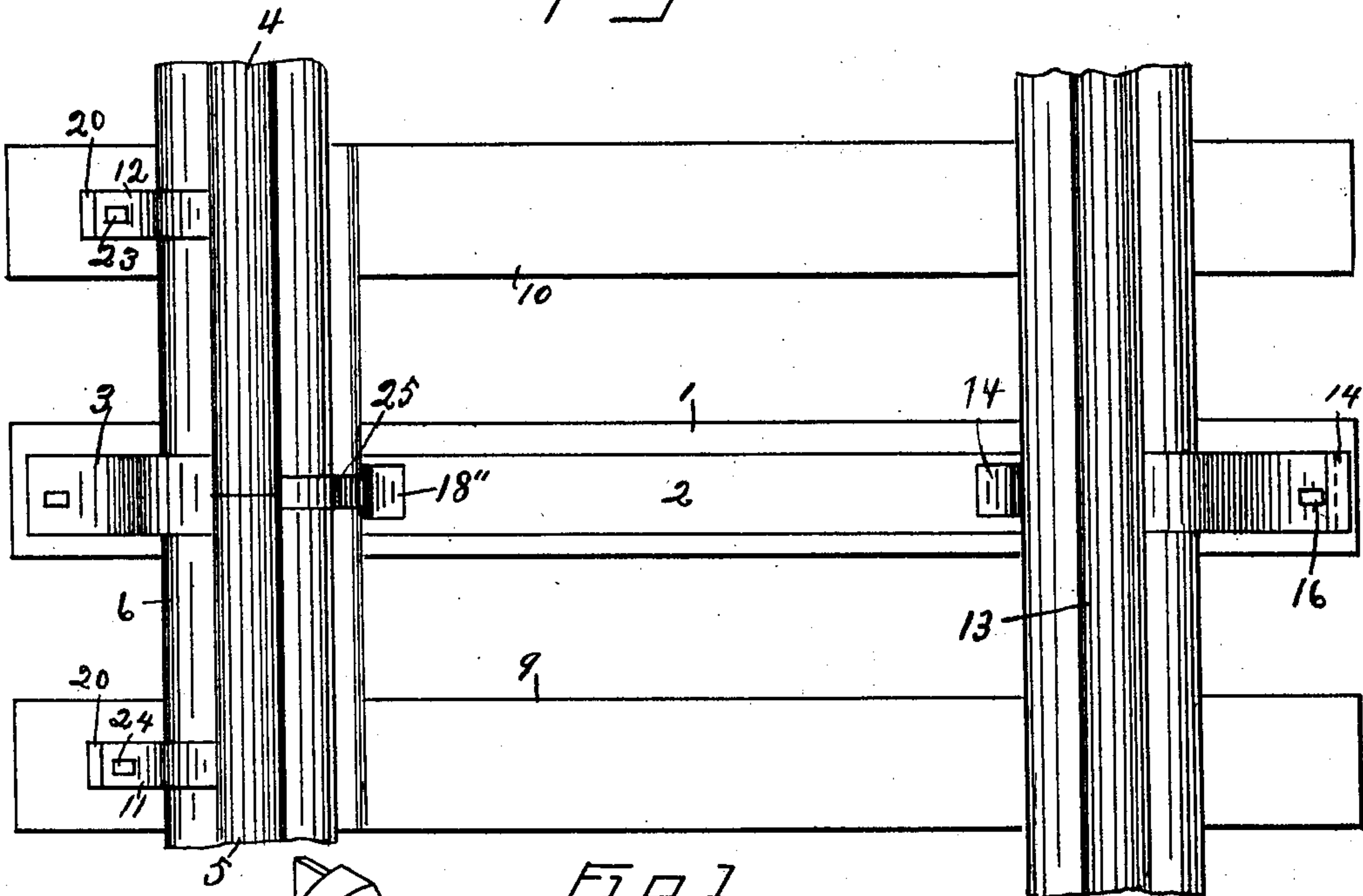


Fig 1

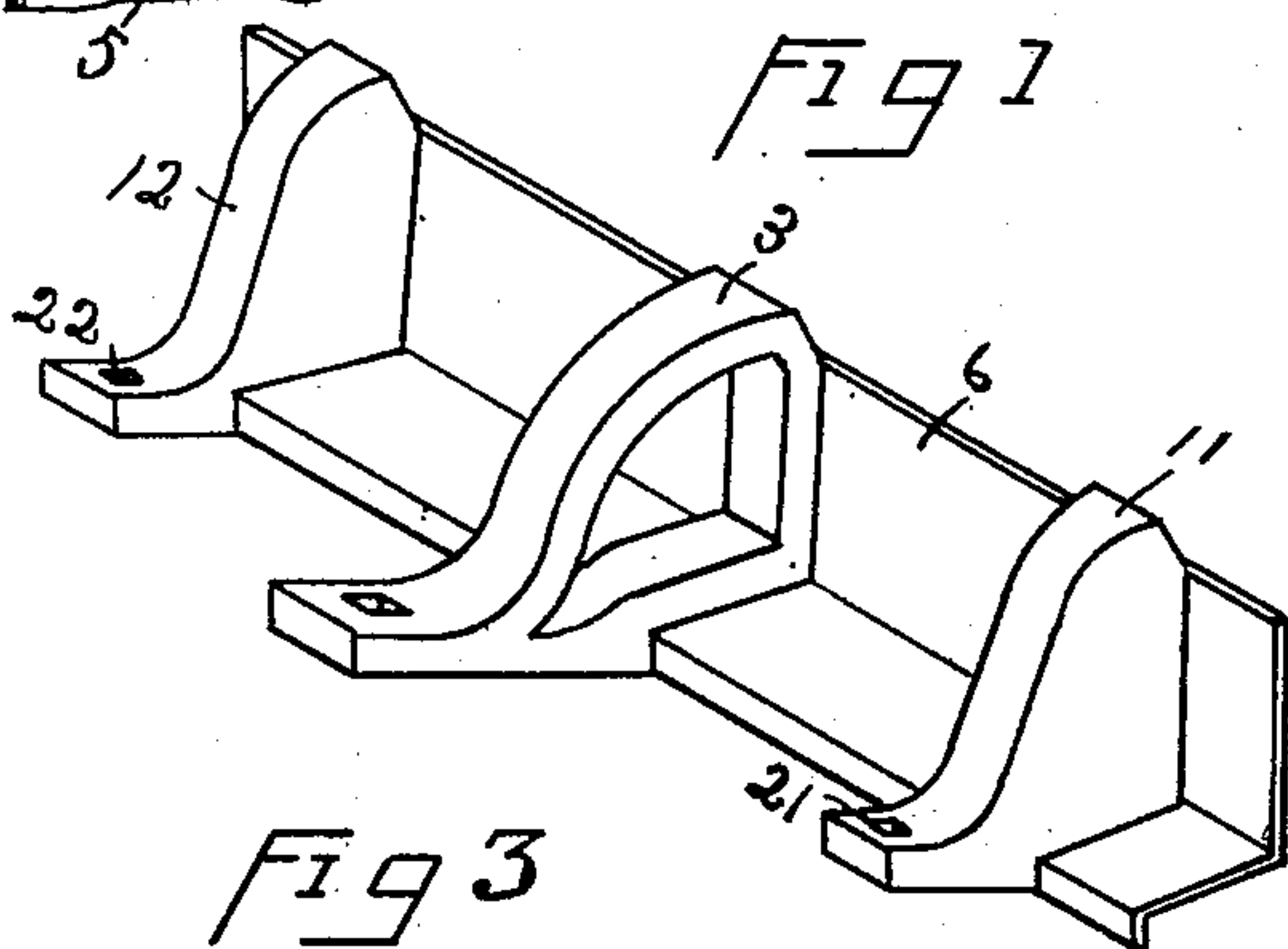


Fig 3

WITNESSES:

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Walter A. Keaton  
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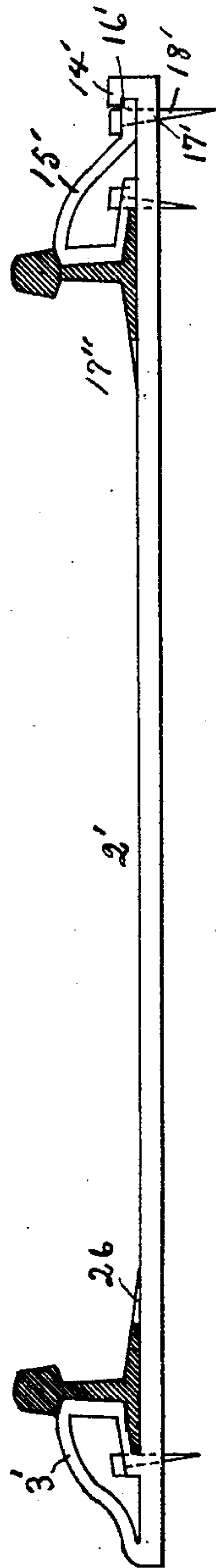


FIG 4

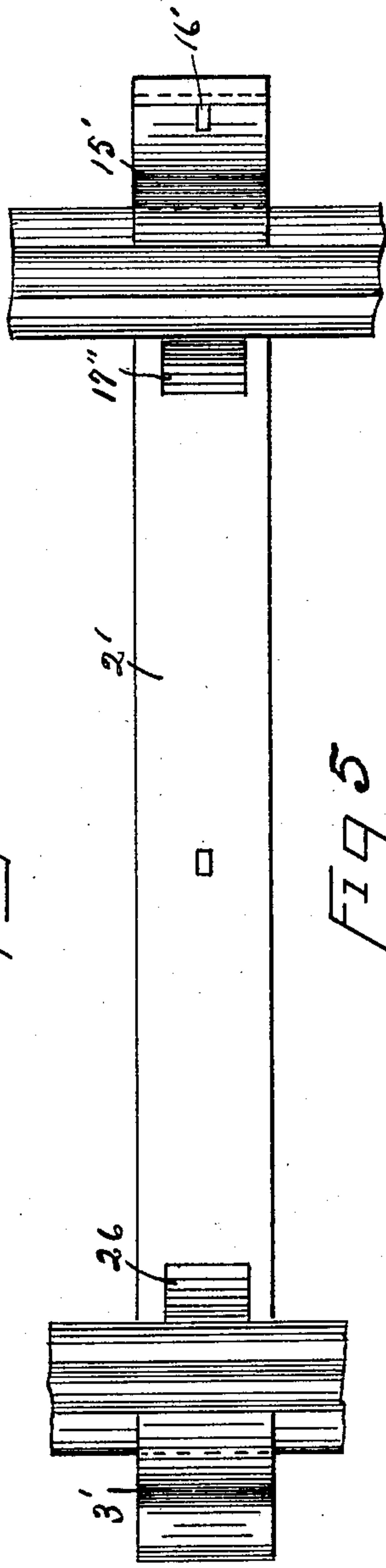


FIG 5

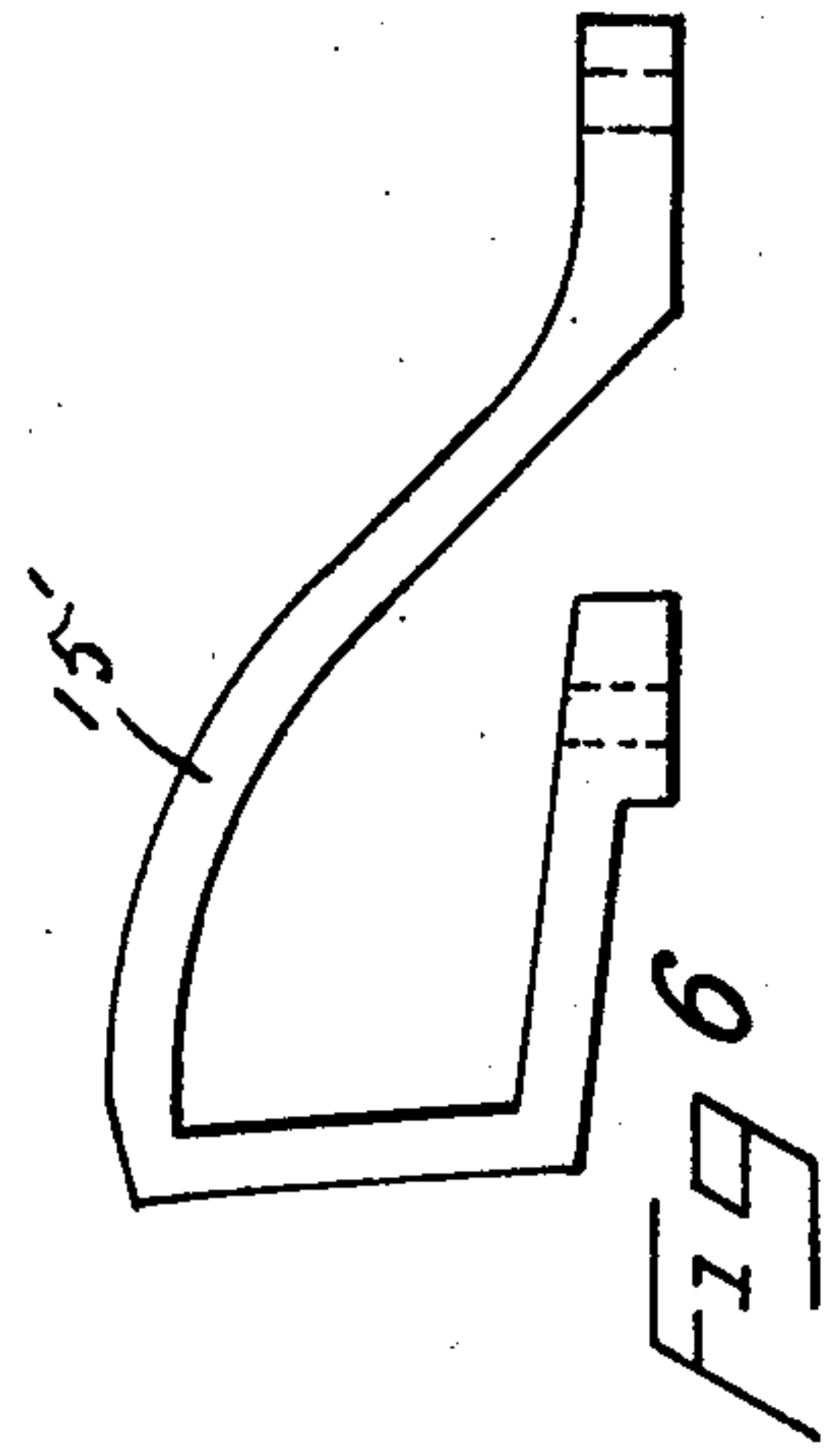


FIG 6

WITNESSES:  
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# UNITED STATES PATENT OFFICE.

WALTER A. KEATON AND ANDREW PEARY, OF HOUSTON, TEXAS, ASSIGNORS OF ONE-THIRD TO A. R. MILLER, OF HOUSTON, TEXAS.

## RAILWAY-RAIL BRACE.

998,011.

Specification of Letters Patent.

Patented July 18, 1911.

Application filed April 19, 1910. Serial No. 556,357.

*To all whom it may concern:*

Be it known that we, WALTER A. KEATON and ANDREW PEARY, citizens of the United States, residing at Houston, in the county of Harris and State of Texas, have invented certain new and useful Improvements in Railway-Rail Braces, of which the following is a specification.

Our invention relates to new and useful improvements in railway rail braces and more particularly to such braces as are designed to strengthen the joints between the ends of contiguous rails.

The object of the invention is to provide a device of the character described which will brace the rail and strengthen the joint in a manner hereinafter set forth.

With the above and other objects in view our invention has particular relation to certain novel features of construction and arrangement of parts an example of which is given in this specification and illustrated in the accompanying drawings, wherein:—

Figure 1 is a plan view of our device attached to the ties and showing its position in relation to the rail. Fig. 2 is a side view thereof. Fig. 3 is a perspective view of the outside brace. Fig. 4 is a side elevation of a modified form of the brace. Fig. 5 is a plan view thereof. Fig. 6 is a side elevation of the outside brace used in our modified form.

Referring now more particularly to the drawings wherein like numerals of reference designate similar parts in each of the figures the numeral 1 refers to a railway tie in the upper side of which the metal plate 2, extending the full length thereof, is buried so that its upper side is flush with the top of the tie. Upon one end of this plate a knuckle shaped brace 3 is immovably secured which abuts against the rail joints, formed by the extremities of rails, 4 and 5, from the outside of the rails. Integral with the brace 3 and extending laterally from each side thereof is the angle shaped brace 6 one wing of which rests against the web 7, of the rail and the other wing of which overlaps the rail flange 8, and the extremities of which rest, respectively, on the ties 9 and 10. The extremities of this brace 6 are held firmly against the rail by means of auxiliary braces 11 and 12 which are integral therewith and it will thus be seen that the plate 2, and the braces 3, 6, 11 and 12

are a unit and the said braces rest against the extremities of the rails 4 and 5 from the outside and serve to strengthen the joint thereof.

The plate 2 extends the full length of the tie, passes under rail 13 and carries at its outer end a shoulder 14 against which the outer end of the knuckle like brace 15 rests. This brace abuts against the web of rail 13 and secures the same against spreading.

A vertical hole 16 is provided in the base of brace 15 and is so positioned relative to a similar hole 17 in plate 2 that when the spike 18 is driven through said holes and into the tie underneath the brace 15 is held wedged between shoulder 14 and the rail.

The plate 2 is provided with two shoulders 17' and 18'' which are integral therewith and raised therefrom one of which 17' rests closely against the base of rail 13 and opposes the pressure of brace 15 and the other one of which is provided for a purpose presently to be set forth.

Opposing brace 6 and longitudinally co-extensive therewith is a brace 19 which abuts against the inside of the rail webs and whose base plate 20 extends entirely under the rail and serves as a base therefor, and is suitably notched to accommodate the ties 1, 9 and 10. The bases of braces 11 and 12 rest on this plate and are provided with vertical holes 21 and 22 so located relative to similar holes in base plate 20 that when spikes 23 and 24 are driven therethrough and into the ties beneath the brace 19 is held firmly against the inner side of the rails and said rails are thus held firmly gripped between the said braces and the joint rendered firm and secure.

The numeral 25 refers to an auxiliary brace designed to rest against shoulder 18'' at one end and to brace against the rails 4 and 5 upon the inside thereof and is held firmly wedged between said shoulder and the rails and thus serves as an additional strengthener for the joint.

In Figs. 4 and 5 we have shown a modified form of our device. This form comprises the plate 2' with the shoulders 17'' and 26 resting against the inner sides of the flanges of their respective rails. One end of this plate carries the brace 3' which is integral with the plate 2' and which rests against the outside of the rail web as shown in Fig. 4. The other end of this plate is provided with



a shoulder 14' interposed between which and the other rail is the removable brace 15'. The brace 15' is provided with a vertical hole 16' so positioned relative to a similar hole 17' in plate 2' as shown in Fig. 4 so that when the spike 18' is driven therethrough and into the tie beneath, the brace 15' is held wedged between the rail and shoulder 14'.

10 A brace constructed in accordance with the foregoing description and the drawings, accompanying the same will be found to be compact and practical and will obviate the necessity for bolts and nuts and thus remove  
15 the liability of the same becoming loose and causing a weak imperfect rail joint.

What we claim is:—

1. A device of the character described including a base plate, an oblong brace carried by one end thereof and secured thereto and designed to rest against the outside of the railway rail, a detachable brace longitudinally co-extensive with the first mentioned brace and bracing said rail from the inside and underneath, said braces being provided with alined perforations for receiving a suitable spike whereby they are secured to the tie, a detachable brace carried by the other end of said plate and resting against  
30 the outside of the other rail.

2. A device of the character described including a base plate, an oblong brace carried by one end thereof, and secured thereto and designed to rest against the outside of the  
35 railway rail, a detachable brace longitu-

dinally co-extensive with the first mentioned brace and bracing said rail from the inside and underneath, said braces being provided with alined perforations for receiving a suitable spike whereby they are secured to the tie, a detachable brace carried by the other end of said plate and resting against the outside of the other rail, and means for securing said detachable brace and said plate together.

3. A device of the character described including a base plate, an oblong brace carried by one end thereof, and secured thereto, and designed to rest against the outside of the railway rail, a detachable brace longitudinally co-extensive with the first mentioned brace and bracing said rail from the inside and underneath, said braces being provided with alined perforations for receiving a suitable spike whereby they are secured to the tie, a detachable brace carried by the other end of said plate and resting against the outside of the other rail, means for securing the detachable brace to the plate and means carried by said plate which rest against the inside of each rail and thereby hold the rails in the proper relative position to each other.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

WALTER A. KEATON.  
ANDREW PEARY.

Witnesses:

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A. TOMPKINS.