

R. G. POWELL.
RAIL JOINT AND FASTENER.
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Patented Sept. 28, 1915.

1,154,724.

Fig. 1.

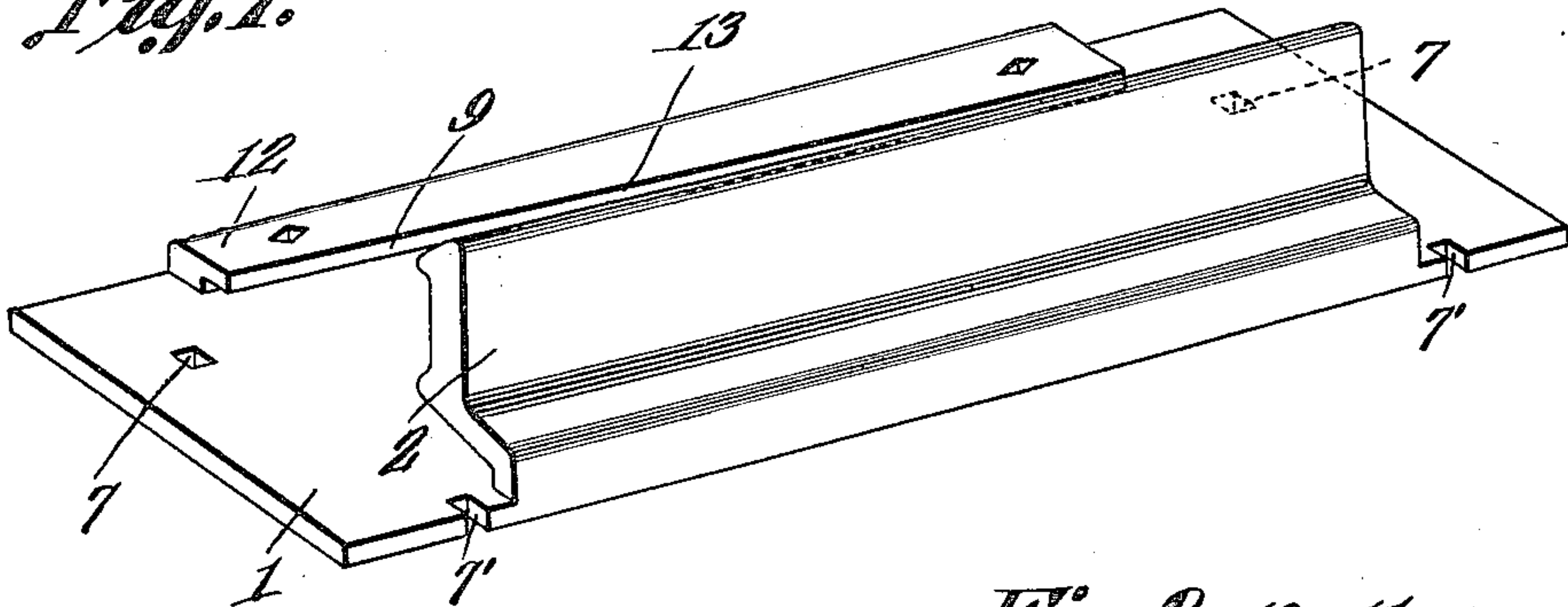


Fig. 2.

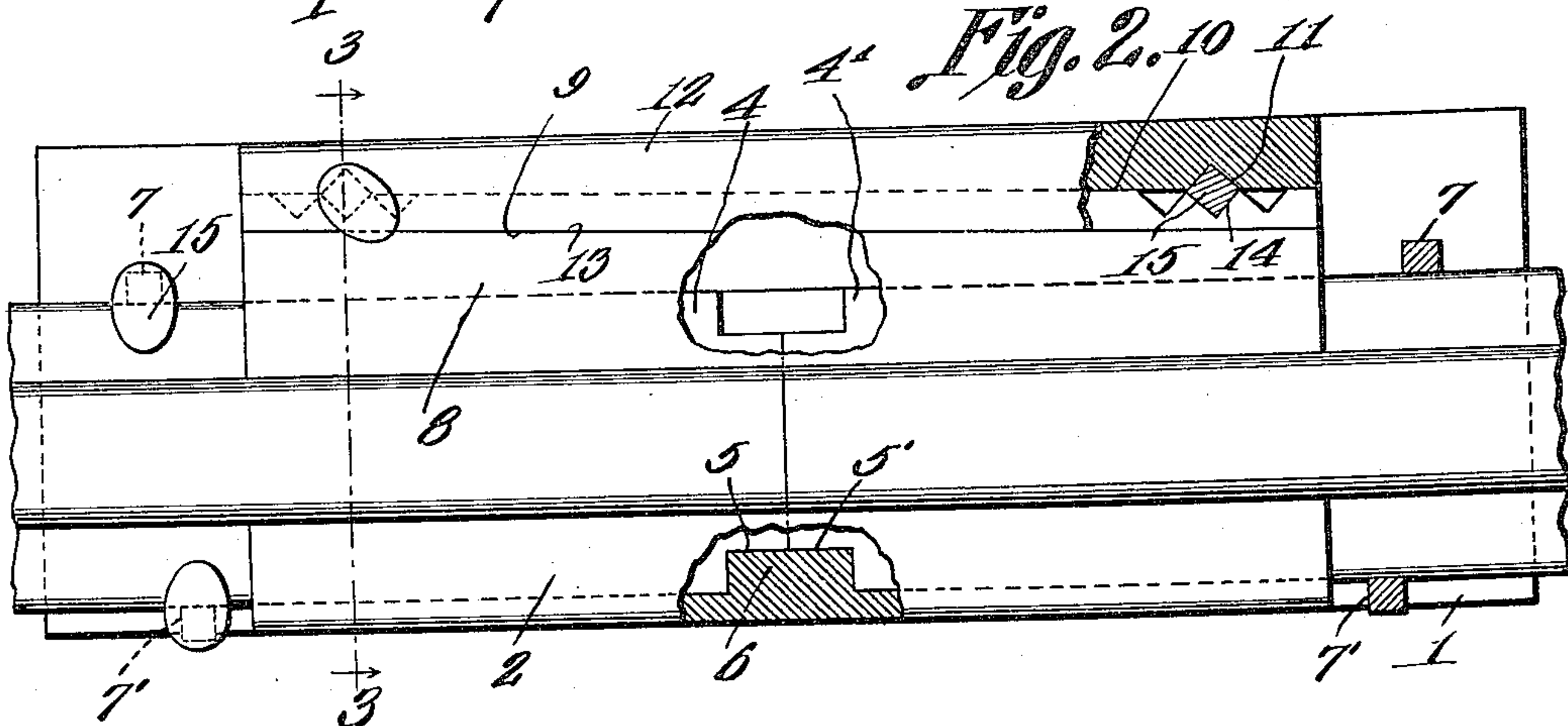
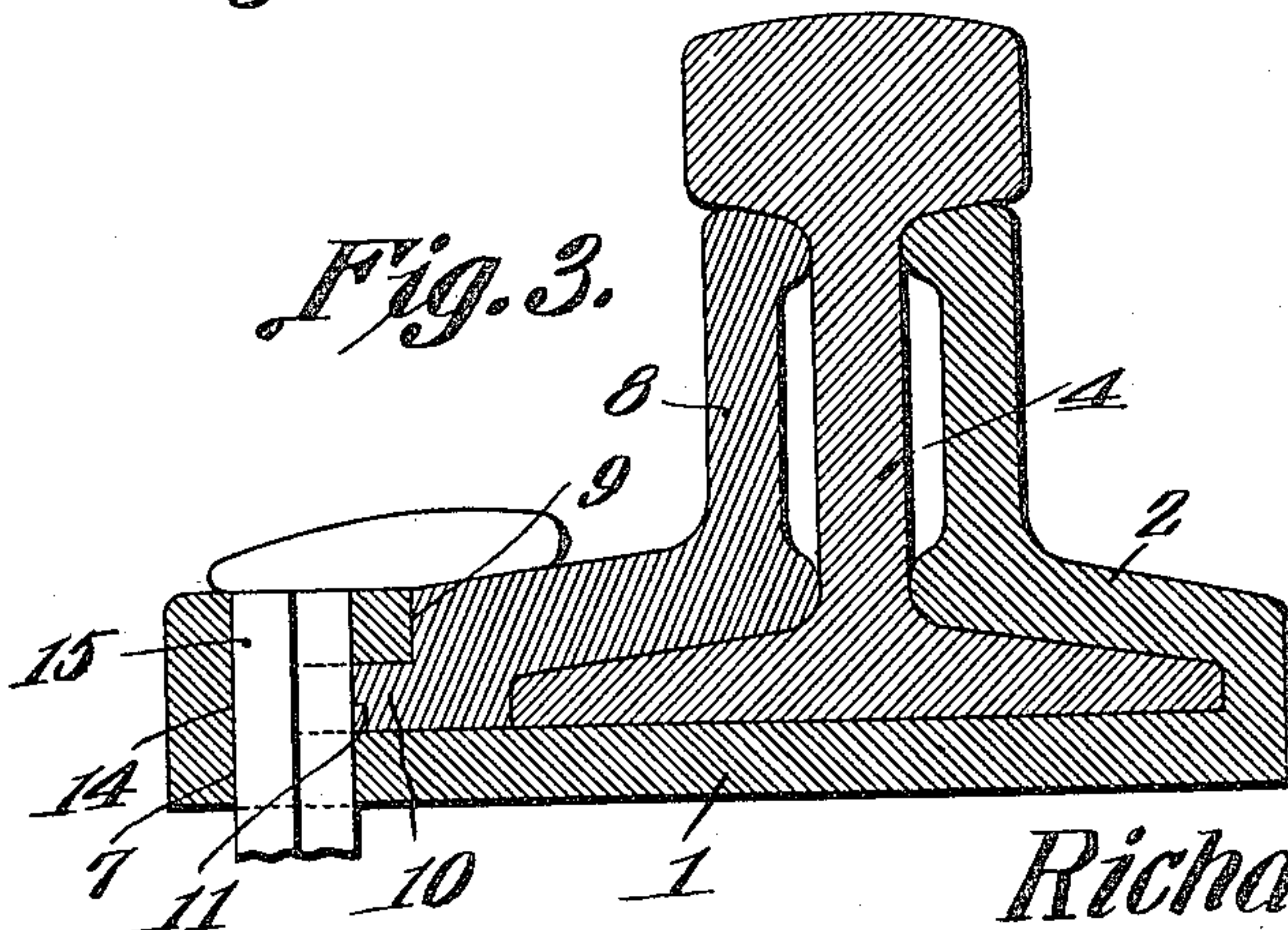


Fig. 3.



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RICHARD G. POWELL, OF LEWISTOWN, PENNSYLVANIA.

RAIL JOINT AND FASTENER.

1,154,724.

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Application filed August 6, 1913. Serial No. 783,435.

To all whom it may concern:

Be it known that I, RICHARD G. POWELL, a citizen of the United States, residing at Lewistown, in the county of Mifflin and State of Pennsylvania, have invented a new and useful Rail Joint and Fastener, of which the following is a specification.

The present invention relates to an improved rail joint and fastener, one object of the invention, being the provision of an angle bar and coöperative supporting structure, adapted to be fitted astride and upon opposite sides of the two abutting rails, to properly lock the joints together and yet permit of the desired longitudinal expansion and contraction, the angle bar members of the present device being of the boltless type, and therefore rendering it unnecessary to bore apertures through the web of the rails to thereby weaken the same.

A further object of the present invention is the provision of a base plate adapted to be connected to two railroad ties and receive thereupon the abutting ends of two rails, said base plate being provided with an integral or fixed angle bar and coöperative means for action with a slidably mounted angle bar, the sliding action of the same relatively to the base producing the desired wedging to securely bind the rail joint between the angle bars and yet permit the desired longitudinal expansion and contraction of the rails, there being provided means for maintaining the wedging or sliding angle bar against longitudinal movement relatively to the base when once secured in place.

With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed can be made within the scope of what is claimed without departing from the spirit of the invention.

In the drawings—Figure 1 is a perspective view of the base plate and the integral portions carried thereby. Fig. 2 is a top plan view of a rail joint with the present invention applied thereto, portions being broken away and shown in section. Fig. 3 is a section taken on line 3—3 of Fig. 2.

Referring to the drawings, the numeral 1 designates the base plate, which is adapted to be disposed to fit upon the adjacent ends

of two railroad ties, and be secured thereto by spikes passing through the spike openings and slots 7 and 7' respectively. Formed integral with the upper face adjacent one edge of the base plate 1 and extending upwardly therefrom is the fixed angle bar or fish plate 2 which is similar to the usual form of fish plate and is disposed to fit upon the same side of the two abutting rail sections 4—4' each one of which is provided with the recessed portions 5—5' in the edge of the base flange, as clearly shown in Fig. 2. The lug 6 is formed integral with the base plate and the adjacent portions of the angle bar 2 and acts as a means for limiting the inward movement of the rail ends when properly positioning the present invention in use.

The wedging angle bar or fish plate 8 is formed separate from the base plate 1 and is adapted to coact with the fish plate 2 and thus properly clamp the rails in place, the edge 9 thereof being formed at an incline while the reduced portion 10 with the locking recesses 11 adjacent their respective ends thereof, as clearly illustrated in Fig. 2, is disposed to fit between the base plate and the reduced end of the plate 12, the edge 13 of the plate 12 being disposed to coact with the edge 9 of the sliding fish plate 8 when moved to the right as shown in Fig. 2, and thus move the fish plate 8 toward the angle bar 2 and clamp the rail sections in place. The recesses and pin receiving apertures 14 are provided in the plate 12 so that when any of the respective recesses 11 are in alignment with the recess in the edge 9 the short locking pins 15 may be inserted therein and thereby lock the sliding fish plate 8 against longitudinal movement. By providing a plurality of the recesses 11, it is evident that the fish plate 8 may be driven in to produce the desired wedging action relatively to the fish plate 2, and until one of the recesses 11 is alined with the recess 14 for the reception of the locking pin.

From the foregoing description, it is evident that with the present rail joint and fastener, that a boltless type is provided which will permit of the ready assembling of the abutting ends of the rails and that although the same will be held against any tilting or spreading action, they will be permitted the necessary longitudinal expansion and contraction due to the temperature.

What is claimed is;

The combination with abutting rails, of rail fastening means including a base plate extending under and constituting a support for the rails, a fish plate integral with one
5 side of the base plate and having an inwardly extending rail engaging projection, there being matching recesses within the meeting ends of the rails for the reception of the projection, a cleat integral with that
10 side of the base plate remote from the fish plate, said cleat being of gradually increasing thickness toward one end and having a longitudinal portion overhanging the base plate, a fish plate having a tapered base in-
15 sertible between the rails and the cleat, said cleat and fish plate cooperating to deflect the fish plate inwardly against the rails, there being an opening within the cleat near each end thereof and a series of corresponding
20 angular recesses within the outer side edge of the base of the fish plate engaging the

cleat, any of said recesses in said fish plate being adapted to be brought into register with the openings in the cleat, pins insertible through the registering openings and
25 recesses thereby to lock the movable fish plate against withdrawal from above the base, the walls of the openings and recesses in the cleat and movable fish plate respectively being obliquely disposed, all portions
30 of the pins located within the cleat and the fish plate being in direct engagement with the walls of the openings and recesses in which they are mounted.

In testimony that I claim the foregoing
35 as my own, I have hereto affixed my signature in the presence of two witnesses.

RICHARD G. POWELL.

Witnesses:

DAVID W. TONER,
JOHN MCGILES.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."