S. A. BRINEY.

RAIL JOINT AND RAIL FASTENER.

APPLICATION FILED NOV. 3, 1910.

986,899. Patented Mar. 14, 1911.

Fig. 1.

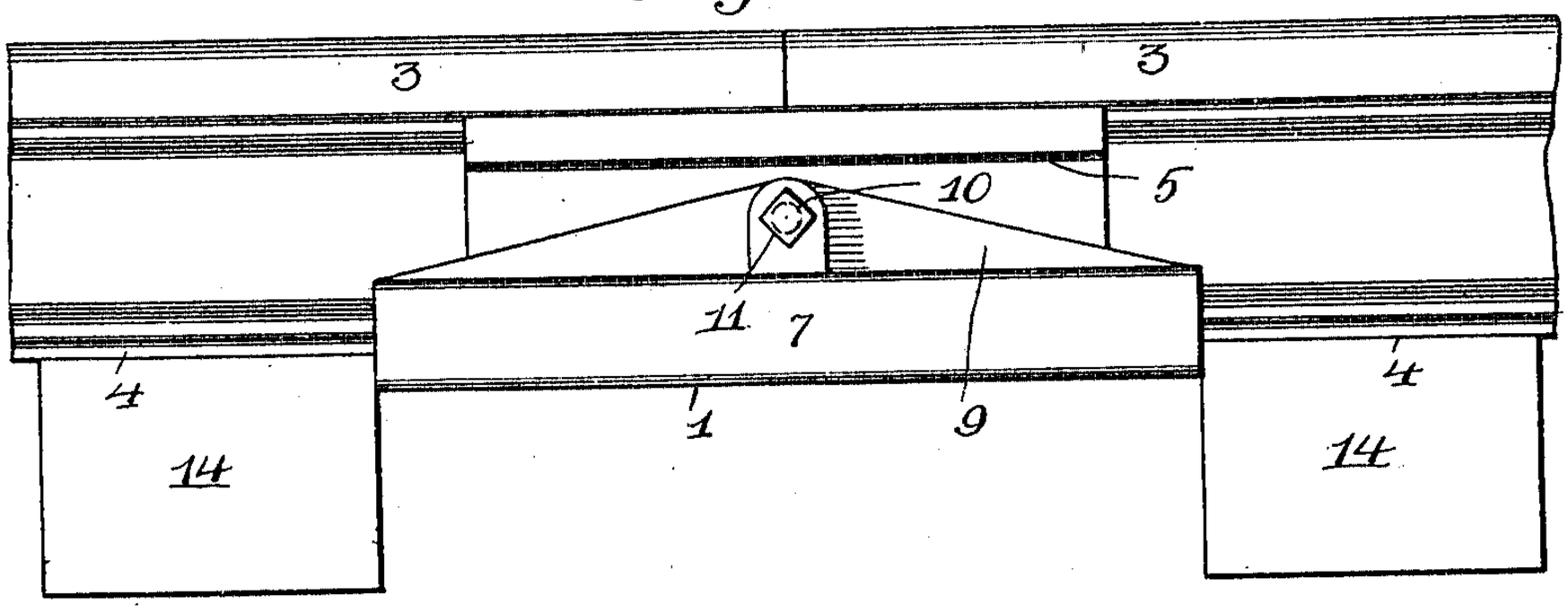


Fig. 2.

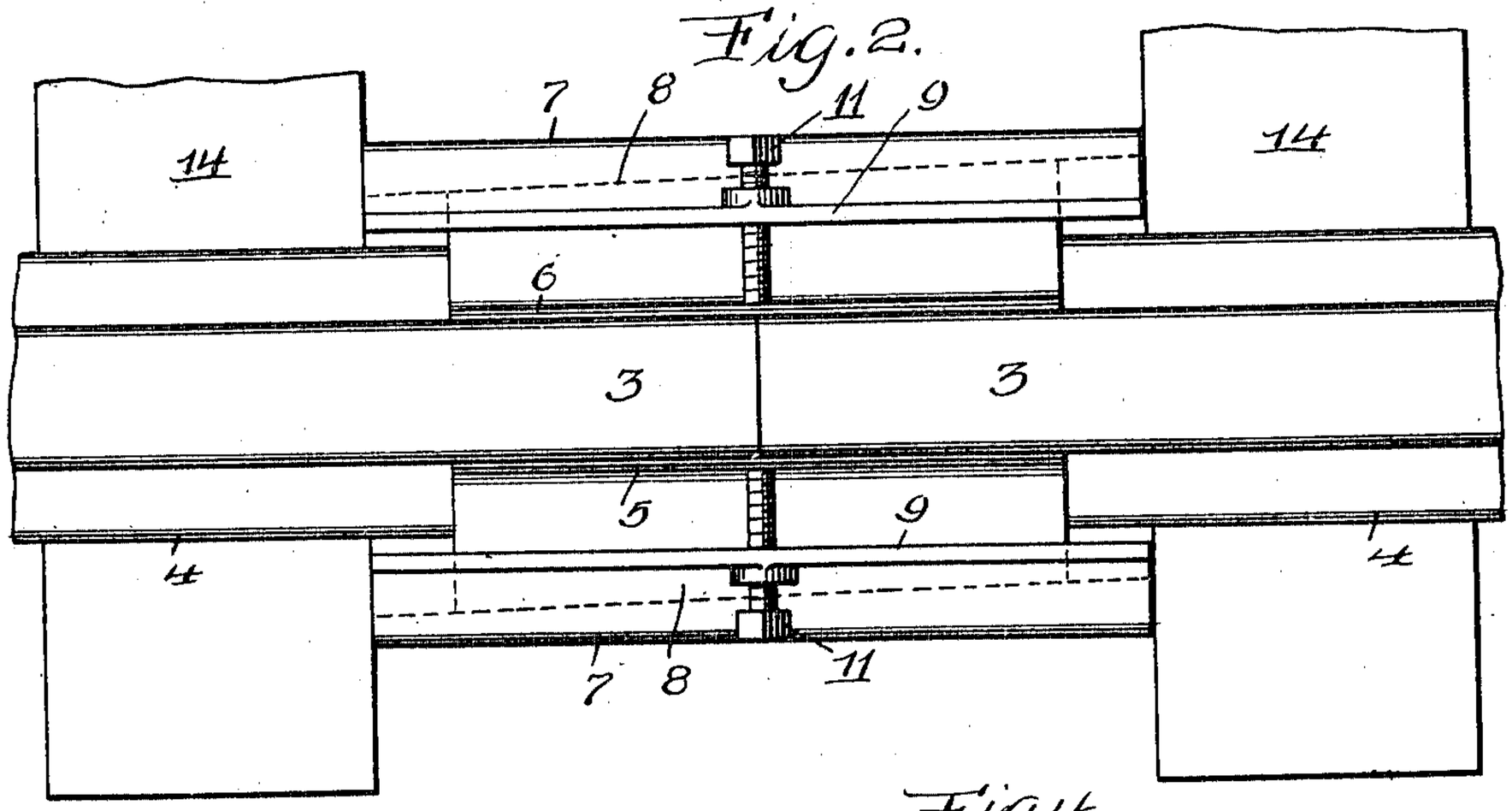


Fig. 3.

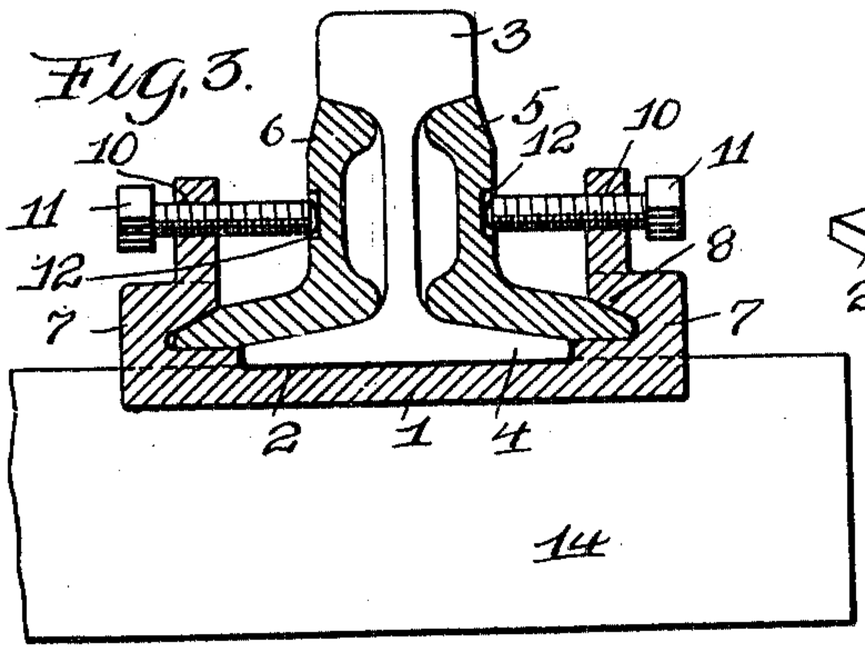


Fig. 4.

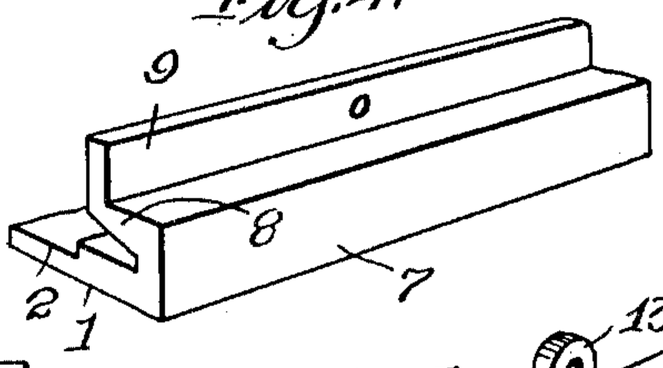
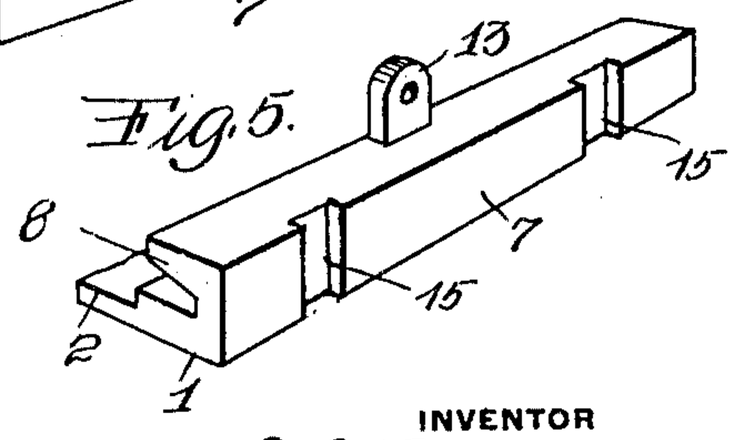


Fig. 5.



WITNESSES

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RAIL-JOINT AND RAIL-FASTENER.

986,899. Specification of Letters Patent. **Patented Mar. 14, 1911.**

Application filed November 3, 1910. Serial No. 590,522.

To all whom it may concern:

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

This invention relates to rail joints and rail fasteners, and the objects of my invention are to provide a novel rail chair and seat for supporting the confronting ends of rails whereby they cannot become accidentally displaced, and to furnish a chair with positive and reliable means for retaining the confronting ends of the rails thereon.

Other objects of the invention are to provide a rail joint that can be easily installed without the use of skilled labor, and used in connection with rails of various weights.

Further objects of the invention are to obviate the necessity of using bolts and nuts for connecting the confronting ends of rails, and to provide a rail joint that can be advantageously used upon curved sections of a track, bridges, and structures subjected to vibrations which have a tendency to cause the rails to spread or become laterally or vertically displaced.

Still further objects of the invention are to provide a rail joint that will allow for the expansion and contraction of the rail, and to accomplish the above results by a joint that is simple in construction, durable, inexpensive to manufacture, and highly efficient for the purposes for which it is intended.

I attain the above objects by a mechanical construction that will be hereinafter specifically described and then claimed, and reference will now be had to the drawing, wherein:

Figure 1 is a side elevation of the rail joint. Fig. 2 is a plan of the same. Fig. 3 is a sectional view of the rail joint. Fig. 4 is a perspective view of a portion of one form of chair, and Fig. 5 is a similar view of a portion of another modified form of chair.

A rail joint in accordance with this invention comprises a rail plate 1 having a longitudinal seat 2 for the confronting ends of rails 3, said rails having the base flanges 4 thereof mounted in the seat 2 with the upper surface of said base flanges flush with the upper surface of the rail plate 1, whereby splice bars 5 and 6 can be mounted upon the base flanges 4 to embrace the rails and assist the webs of said rails in supporting the heads thereof, as best shown in Fig. 3 of the drawings. The outer longitudinal edges of the splice bars extend at an inclination, the inclination of the longitudinal edge of the bar 5 being oppositely disposed with respect to the inclined longitudinal edge of the bar 6.

The rail plate 1 has the longitudinal edges thereof provided with vertical enlargements 7 extending from one end of the rail plate to the opposite end thereof, these enlargements overhanging the outer edges of the splice bars 5 and 6, to provide pockets at 8, and having longitudinal vertical webs 9, said webs intermediate the ends thereof being provided with threaded openings 10. The inner wall of each of the pockets 8 extends at an inclination whereby when the bars 5 and 6 are mounted in the pockets a wedge action will take place. Adjustably mounted in the threaded openings 10 are screw bolts 11 and the inner ends of these bolts are adapted to engage in sockets 12 provided therefor in the outer sides of the splice bars 5 and 6.

As shown in Fig. 4 of the drawings the web 9 can be made in the form of a longitudinal flange, while in Fig. 5 of the drawings the web can be dispensed with and simply a vertical apertured lug 13 employed.

In the preferred form of construction the rail plate is located between two ties 14 with the splice bars 5 and 6 of a less length than the rail plate, but if it is desired to mount the rail plate upon the tie, the outer sides of the enlargements 7 are provided with vertical spike grooves 15 whereby spikes can be used for securing the rail plate in position.

It is obvious that the rail joint can be made of various sizes, shapes, and of various kinds of material, but it is preferable to use steel and to arrange the joint whereby it will provide practically a continuous tread for the rolling stock, thereby eliminating the jarring and bumping experienced by rolling stock passing over the present type of joint.

What I claim, is:

In a rail joint, the combination with the confronting ends of rails, of a rail plate

having a longitudinal seat adapted to receive the base flanges of said rails whereby the upper surfaces of said flanges will be flush with the upper surface of the rail plate, said plate provided with pockets with the inner wall thereof inclined in the direction of the length of the plate, splice bars mounted upon the base flanges of said rails and extending into said pockets, the longitudinal edges of said splice bars being inclined in the direction of the length of the bars and engaging the inclined walls of the pockets whereby the bars will be wedged in position, longitudinal enlargements carried by the edges of said rail plate and extending from one end of said rail plate to the opposite end and adapted to overhang the outer edges of said splice bars, vertical webs carried by said enlargements and having apertured openings formed therein, and screw bolts mounted in said webs and adapted to have the ends thereof engage in sockets provided therefor in said splice bars, substantially as and for the purpose herein described.

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

SMITH A. BRINEY.

Witnesses:
HENRY G. BACHLE,
JOHN L. HODEL.