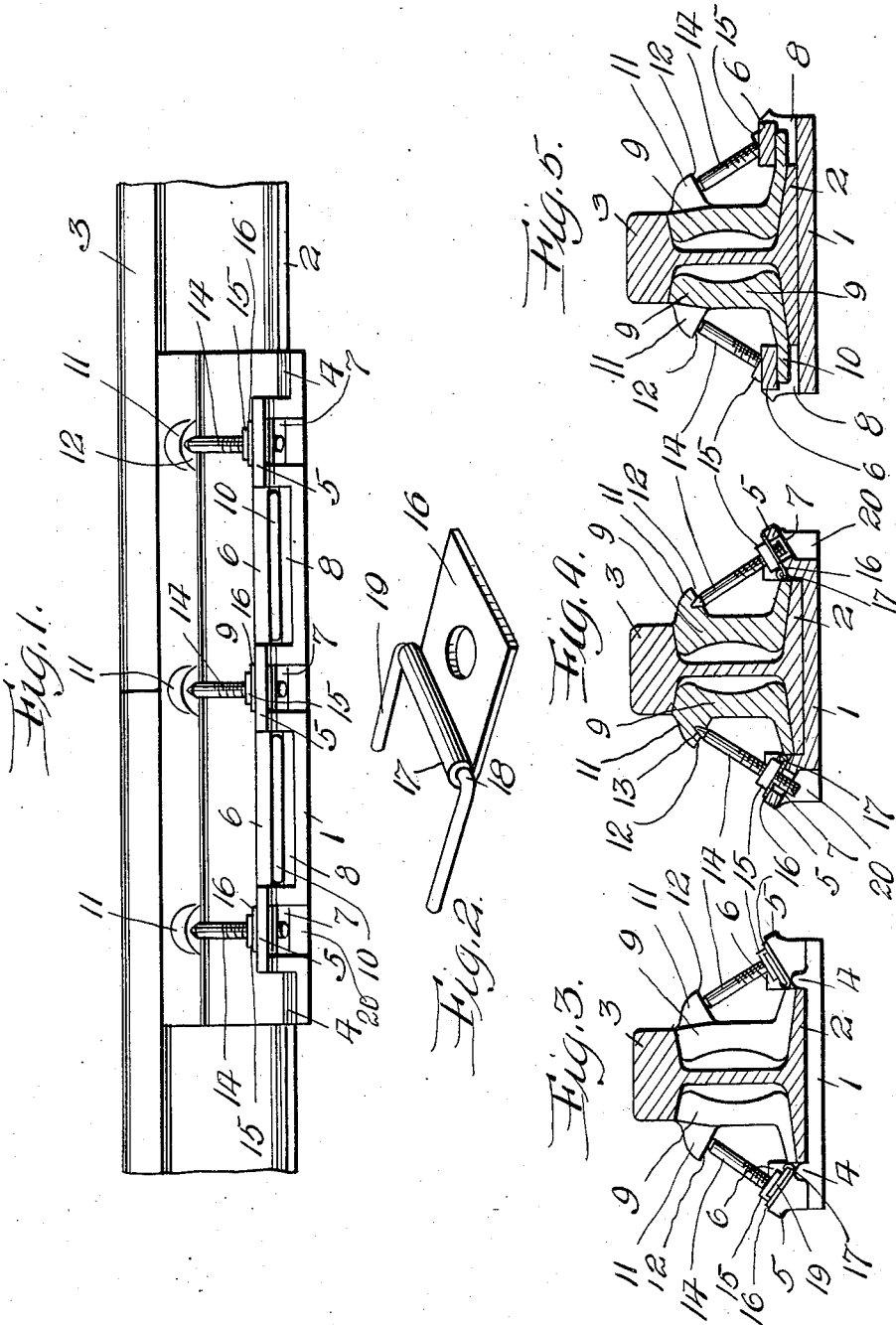


J. W. GRANT.  
RAIL JOINT.

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1,015,677.

Patented Jan. 23, 1912.



WITNESSES

*Samuel Payne*  
*Ralph C. Evert.*

INVENTOR

*J. W. Grant.*

BY

*A. C. Evert & Co.*

ATTORNEYS

# UNITED STATES PATENT OFFICE.

JACOB W. GRANT, OF HANLIN STATION, PENNSYLVANIA, ASSIGNOR OF ONE-HALF TO  
ANNA CORA GRANT, OF HANLIN STATION, PENNSYLVANIA.

## RAIL-JOINT.

1,015,677.

Specification of Letters Patent.

Patented Jan. 23, 1912.

Application filed October 25, 1911. Serial No. 656,637.

*To all whom it may concern:*

Be it known that I, JACOB W. GRANT, a citizen of the United States of America, residing at Hanlin Station, 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 drawing.

This invention relates to rail joints, and the primary object of my invention is the provision of positive and reliable means for holding the confronting ends of rails or bracing rails upon a curve.

Another object of this invention is to provide a novel rail chair that can be easily and quickly placed in position to support broken or injured rails.

A further object of this invention is to furnish a rail chair with simple and effective means for retaining splice bars in engagement with the confronting ends of rails, whereby one rail cannot become accidentally displaced relatively to the other rail or one rail spreading relatively to the other rail of a track, thereby preserving the alinement of rails and insuring a safe movement of heavy rolling stock upon the rails.

A still further object of this invention is to furnish a rail joint with novel nut locking devices that will prevent accidental displacement of nuts due to vibrations caused by rolling stock passing over a joint.

I attain the above objects by a mechanical construction that is durable, inexpensive to manufacture and highly efficient for the purposes for which it is intended.

The invention 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 a rail joint in accordance with this invention, Fig. 2 is an enlarged perspective view of a detached locking device, Fig. 3 is an end view of the rail joint, and Figs. 4 and 5 are cross sectional views of the same.

The reference numeral 1 denotes a rail chair supporting the base flanges 2 of rails 3, said rails having confronting ends thereof located approximately intermediate the ends of the chair. The ends of the chair are provided with oppositely disposed lugs 4 engaging the edges of the flanges 2, and said chair has the longitudinal edges there-

of provided with equally spaced angularly disposed supports 5 connected by straps 6. The supports 5 are provided with openings 7, and the straps 6 provide openings 8 between said supports. Bracing the sides of the rails 3 are splice bars 9 and the lower edges of these bars rest upon the flanges 2 and are provided with tongues 10 extending into the openings 8 under the straps 6. The upper edges of the splice bars have equally spaced bosses 11 having flat faces 12 in parallelism with the upper faces of the supports 5. Engaging in the bosses 11 are the pointed ends 13 of bolts 14, said bolts having the lower ends thereof threaded and provided with nuts 15. The lower ends of the bolts extend into the opening 7 of the supports 5 and these bolts are adapted to retain the splice bars in engagement with the rails 3, whereby the heads of said rails will be supported. Encircling the bolts 14, upon the supports 5, are washers 16 having the inner edges thereof provided with barrels 17. Pivotaly mounted in the barrels 17 are wire yokes 18 having side arms 19. The arms 19 are adapted to engage oppositely disposed facets of the nuts 15 and prevent said nuts from rotating. This is accomplished by the barrels 17 engaging the straight edges of the splice bars 9, between the tongues 10. The yokes can be easily swung out of engagement with the nuts when it is desired to tighten or loosen the nuts or to remove the splice bars 9.

The angularly disposed supports 5 have depending therefrom vertical walls 20 which provide what may be termed housings, and extending in these housings are the lower ends of the bolts 14. The bolts 14 can be adjusted by a suitable tool engaging the lower ends thereof within the housings. The longitudinal edges of the chair permit of spikes or other fastening means being employed for securing the chair to ties, sleepers or other supports.

The joint in its entirety can be made of light and durable metal and of such sizes as to firmly support the large rails now used for supporting heavy rolling stock.

What I claim is:—

1. In a rail joint, the combination with rails, of a chair adapted to support the base flanges thereof, angularly disposed supports carried by the longitudinal edges of said

- chair, straps connecting said supports and providing openings, splice bars bracing said rails and having tongues projecting into said openings, bolts arranged in said supports and having the upper ends thereof engaging the upper edges of said splice bars, and nuts screwed upon said bolts and adapted to hold said bolts in engagement with said splice bars.
2. In a rail joint, the combination with rails, of a chair adapted to support said rails, lugs carried by the ends of said chairs and engaging the base flanges of said rails, angularly disposed supports carried by the longitudinal edges of said supports, straps connecting said supports and providing openings, splice bars bracing the sides of said rails, bosses carried by the upper edges of said splice bars and confronting said supports, bolts arranged in said supports and having the upper ends thereof engaging in said bosses, and nuts screwed upon said bolts for holding said bolts in engagement with said splice bars.
- In testimony whereof I affix my signature in the presence of two witnesses.
- JACOB W. GRANT.
- Witnesses:  
MAX H. SROLOVITZ,  
C. T. HOON.

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