

J. YOUNGSTON.
RAIL JOINT.
APPLICATION FILED JUNE 3, 1911.

Patented Mar. 12, 1912.

1,020,070.

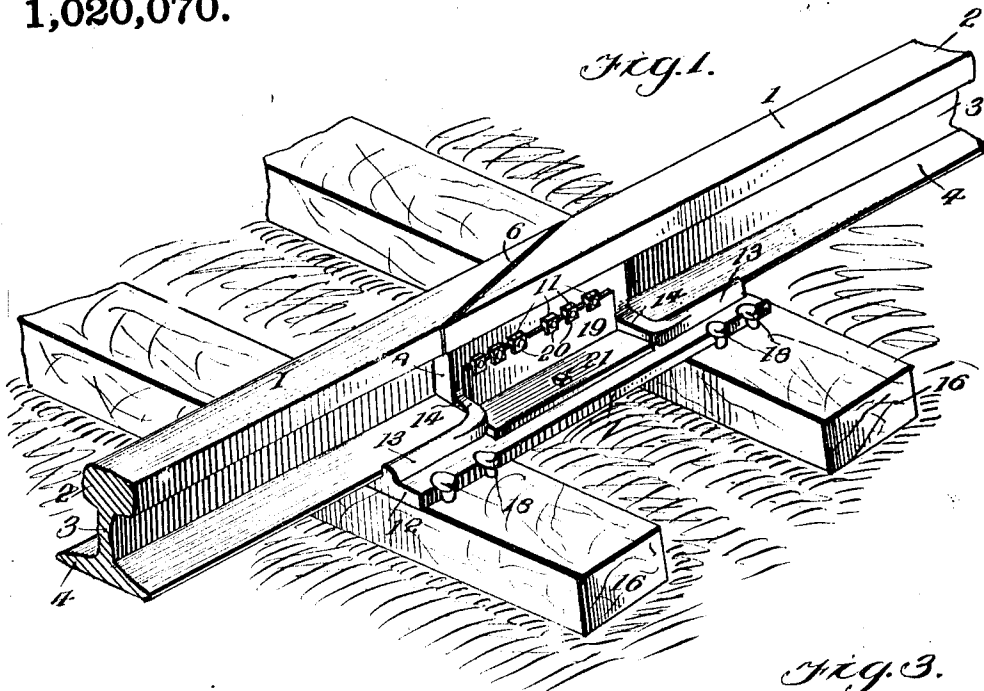


Fig. 2.

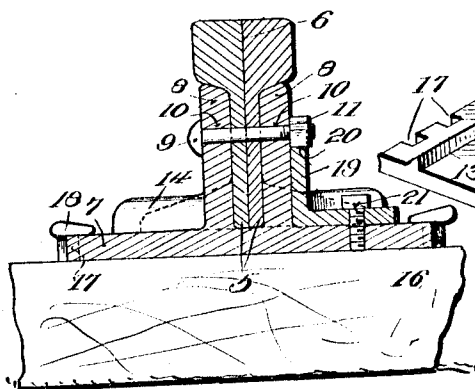


Fig. 3.

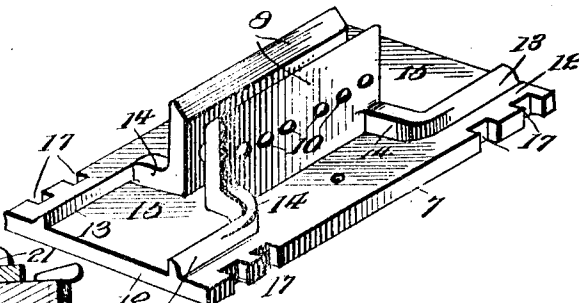
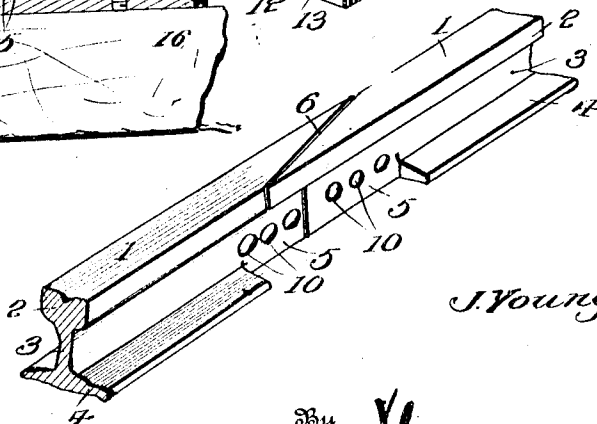


Fig. 4.



Witnesses
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UNITED STATES PATENT OFFICE.

JAMES YOUNGSTON, OF BEAR POPLAR, NORTH CAROLINA.

RAIL-JOINT.

1,020,070.

Specification of Letters Patent.

Patented Mar. 12, 1912.

Application filed June 3, 1911. Serial No. 631,156.

To all whom it may concern:

Be it known that I, JAMES YOUNGSTON, citizen of the United States, residing at Bear Poplar, in the county of Rowan and State of North Carolina, have invented certain new and useful Improvements in Rail-Joints, of which the following is a specification.

The present invention comprehends certain new and useful improvements in rail joints, and the object of the invention is to connect the meeting ends of the companion rail sections together in a thoroughly reliable and efficient manner so as to provide a joint which is simple, durable and strong, and to maintain a smooth tread surface to prevent the pounding of the wheels of the rolling stock as they pass over a joint.

-Another object of the invention is to provide an improved rail chair having a pair of opposed cheeks fitting against opposite sides of and spanning the joint between relatively narrow tongues formed at the meeting ends of the rail sections, the base plate of the chair being extended longitudinally beyond the cheeks, at each end of the chair to fit under and support the ends of the base flanges of the rail sections.

With these and other objects in view as will more fully appear as the description proceeds, the invention consists of certain constructions, arrangements and combinations of the parts that I shall hereinafter fully describe and claim.

For a full understanding of the invention, reference is to be had to the following description and accompanying drawing, in which:

Figure 1 is a sectional perspective view of my improved rail joint; Fig. 2 is a transverse section thereof; Fig. 3 is a detail perspective view of the chair detached; and Fig. 4 is a detail view of the meeting ends of the rail sections.

Corresponding and like parts are referred to in the following description and indicated in all the views of the accompanying drawing by the same reference characters.

Referring to the drawing, the numeral 1 designates a pair of companion rail sections, each of which is substantially of conventional form, except as hereinafter noted, and comprises a head 2, a web 3 and a base flange 4. At the meeting end of each rail section the base flange 4 is cut away on both sides of the rail flush with the web 3, for a

predetermined distance, so that the web and head of the rail section extend longitudinally beyond the base flange to constitute a relatively narrow tongue 5. The extremities of the tongues abut against each other to form the joint 6, and are preferably suitably beveled to provide an oblique joint, since such a joint or scarf affords a practically continuous tread surface and thus insures against pounding of the wheels of the rolling stock as they pass over the joint. However, it is to be understood that a square joint may be formed if desired.

The rail sections are coupled together through the medium of a chair comprising a base plate 7 which is preferably of greater width than the base flange 4 and which is formed between its side edges with a pair of co-acting longitudinal cheeks 8 upstanding therefrom in opposed relation. The cheeks fit between the ends of the base flanges 4 and are spaced apart transversely to lie snugly against opposite sides of the web portions of the tongues 5. The upper edges of the cheeks bear against the under surfaces of the head portions of the tongues and form supports therefor. The tongues are retained in confinement between the cheeks by bolts 9 passing through transversely registering openings 10 in said parts, certain of said openings being elongated, as shown, for the purpose of affording the tongues sufficient longitudinal play to compensate for expansion and contraction of the rail sections. Nuts 11 are applied to the free ends of the bolts and are all positioned against the outer face of the same cheek, for a purpose to be hereinafter disclosed.

Attention is particularly directed to the fact that the chair is formed at its opposite ends with basal extensions 12 that project longitudinally beyond the cheeks and that fit under and support the adjacent end portions of the base flanges 4 of the rail sections. Upstanding from the upper face of each basal extension are longitudinal ribs 13 that extend along and abut against the side edges of the adjacent base flange 4 to brace the parts against lateral displacement. Transverse ribs 14 bear against the end edges of the base flange and connect the longitudinal ribs with the adjacent ends of the cheeks. By virtue of this arrangement of ribs there is provided, in effect, a depressed seat 15 on the upper face of the extension 12, for the reception of the base flange of the rail sec-

tion. The basal extensions also serve the additional function of tie plates and rest upon the upper faces of adjacent cross ties 16 to support the body portion of the chair therebetween, thereby preventing any sagging of the joint and saving the time and labor now required in tamping up low joints. In the side edges of the extensions are formed notches 17 through which spikes 18 are driven into the cross ties.

19 designates a locking member which is angular in cross section and is mounted on the chair with one wing lying against the outer face of one of the cheeks and formed in its upper edge with a plurality of recesses 20 in which the nuts 11 are received and confined against turning movement, so that the nuts are all locked on the bolts. The other wing of the locking member extends substantially horizontally and rests upon the upper face of the lateral portion of the base plate 7 and is secured thereto by a screw 21 or other equivalent fastening device. It is to be noted that the locking

member fits snugly between the transverse ribs 14 at the ends of the cheek and is effectually braced thereby against longitudinal strain.

Having thus described the invention, what I claim as new is:

In a rail joint, the combination with the meeting ends of a pair of companion rail sections having their base flanges cut away on both sides for a predetermined distance from the joint, of a chair embracing the cutaway portions of the rail sections and spanning the joint, the chair being formed at its opposite ends with longitudinally projecting basal extensions fitting under and supporting the ends of the base flanges of the rail sections.

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

JAMES YOUNGSTON. [L. s.]

Witnesses:

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