S. J. RICE.

RAIL JOINT.

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1,009,575. **Patented Nov. 21, 1911.**

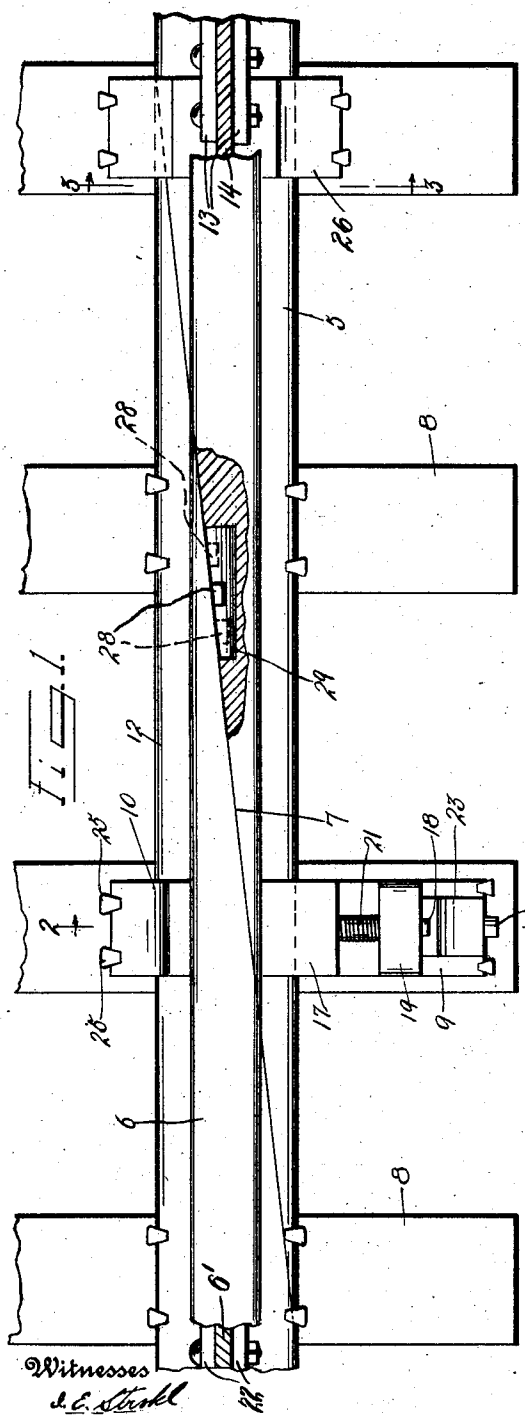

Fig. 1.

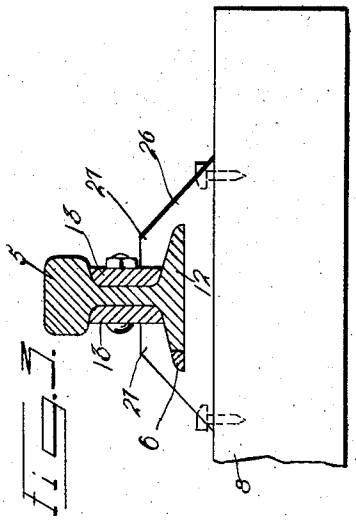

Fig. 3.

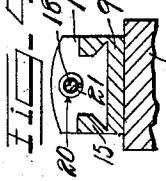

Fig. 4.

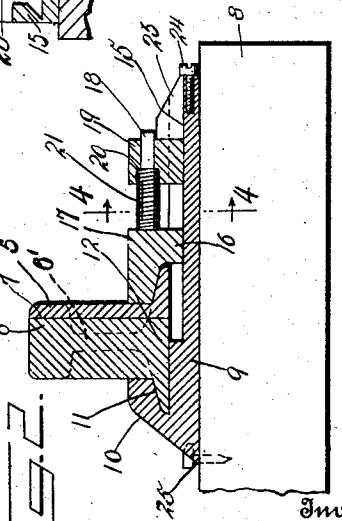

Fig. 2.

Witnesses

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RAIL-JOINT.

1,009,575. Specification of Letters Patent. Patented Nov. 21, 1911.

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To all whom it may concern:

Be it known that I, SAMUEL J. RICE, a citizen of the United States, residing at Loma, in the county of Cavalier, State of North Dakota, have invented certain new and useful Improvements in Rail-Joints; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in rail joints and the leading object in view is to provide an improved joint comprising beveled engaging rail ends and means for holding the rail ends against each other adapted to permit the rails to expand and contract under changes of temperature.

With the above and other objects in view the invention consists in certain constructions, combinations and arrangements of parts, clearly described in the following specification and clearly illustrated in the accompanying drawings, in which;—

Figure 1 is a top plan view showing the improved chair and locking means applied in operative position beneath a rail, the lateral lug being shown in dotted lines at opposite limits of its movement. Fig. 2 is a transverse sectional view taken on the line 2—2 of Fig. 1. Fig. 3 is a transverse sectional view taken on the line 3—3 of Fig. 1. Fig. 4 is a vertical sectional view taken on the line 4—4 of Fig. 2.

Referring to the accompanying figures, 5 and 6 denote the meeting ends of rail sections which are formed with long beveled faces 7 contacting with each other so that the sections or ends 5 and 6 can have relative longitudinal movement without forming spaces or gaps therebetween, such as are formed between the confronting or meeting ends of rails in common use. The rail sections or ends 5 and 6 are supported on the usual ties 8.

In order to hold the rail ends or sections 5 and 6 against relative lateral movement on the ties 8 an improved locking device and chair is provided which consists of a basal plate or chair 9 having an upstanding shoulder or lug 10 which is suitably curved at 11 to engage the base 12 of the rail section 6.

The fish plates 13 are disposed against the web 14 of the rail section 5. One end of the chair or basal plate 9 extends a considerable distance laterally of the rail sections and is formed with a dove-tailed groove 15 in which a lug 16 formed integral with the block 17 is slidably disposed. The block 17 is provided with a rearwardly extending stem or pin 18 which passes through an opening in the block 19. The inner end of the opening of the block 19 is enlarged to form a shoulder 20 against which the outer end of the coiled spring 21 bears, said coiled spring being mounted on the pin or stem 18 and bearing at its inner end against the block 17 to normally hold said block against the web 14 of the rail section 5 and thereby hold the latter against the web 6′ of the rail section 6. Fish plates 22 are secured upon opposite sides of the rail section 6 beyond the tapered point of the rail section 5 for use in a similar manner as the fish plates 13 so as to couple a rail section to one end of each of the rail sections 5 and 6.

The block 19 is held against movement on the basal plate or chair 9 by means of a buffer 23 which tightly fits in the groove 15 and is engaged on its outer end by an adjustable device or screw 24, which is provided for the purpose of adjusting the position of the block 19 on the basal plate or chair 9 whereby the tension of the spring 21 may be varied. The chair or plate 9 is held against movement on its supporting tie by means of spikes 25. The rail sections or ends 5 and 6 are also supported by means of a chair 26 which is formed with integral upstanding lugs or shoulders 27 which engage the bases of said rail ends or sections and the fish plates secured to said rail ends or sections.

The chair 26 is secured in place by passing the base of one of the rail sections between the upstanding flanges or shoulders 27 to contact with one shoulder and then disposing the base of the other rail end or section between it and the other shoulder. The rail section 6 is formed with a lateral lug 28 which is adapted to move in the longitudinally disposed slot 29 of the rail section 5, whereby said rail sections can have relative movement without danger of separating the beveled faces 7 thereof and consequently opening up dangerous spaces or gaps.

I claim:—

1. In a rail joint, the combination with the ends of two abutting rails having beveled meeting faces, of a chair adapted to engage one of the rails and the end of the other rail section to hold the same in posi-

tion, a resilient chair engaging the other rail and opposite rail end to permit sliding movement of said end, a lug projecting from the beveled face of one of the rails and adapted to extend into a slot in the adjacent section of the other rail section to permit the rails to have relative longitudinal movement and to limit said movement.

2. In a rail joint, the combination with the beveled meeting ends of two rails; of a chair having a basal plate formed with a flange adapted to engage the base of a rail and with a portion having a dove-tailed groove therein, a block formed with a lug movable in the groove of said plate and formed to engage the base of a rail section, a pin integral with said block and extending outwardly thereof, a second block slidable in said groove and formed with an opening to receive the outer end of the pin, a spring mounted on said pin and bearing at its inner end against the first block and at its outer end against the second block, a buffer disposed in the groove and bearing against the second block and an adjustable device threaded to the chair against the buffer for adjusting the tension of the spring.

3. In a rail joint, a chair having means to engage the base of a rail, a dove-tailed groove formed in the chair, a spring held block slidably disposed in said groove, an adjustable buffer disposed in the groove for adjusting the tension of the block, a pair of rail sections having beveled contacting faces and held in secured position on the chair between the rail engaging means thereof and the spring held block and a lug formed upon one section and slidably engaged in a slot in the other section to limit the movements of the rails relative to each other.

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

SAMUEL J. RICE.

Witnesses:

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