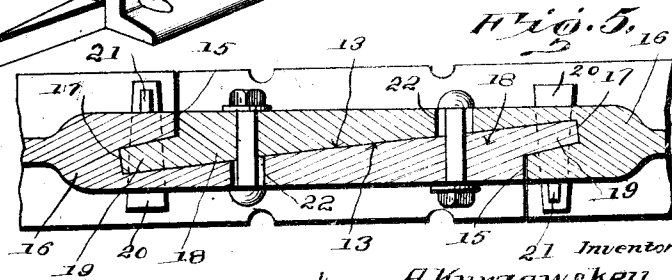
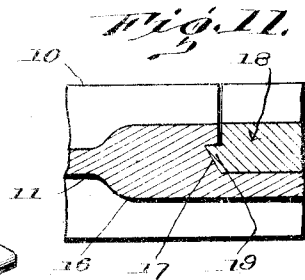
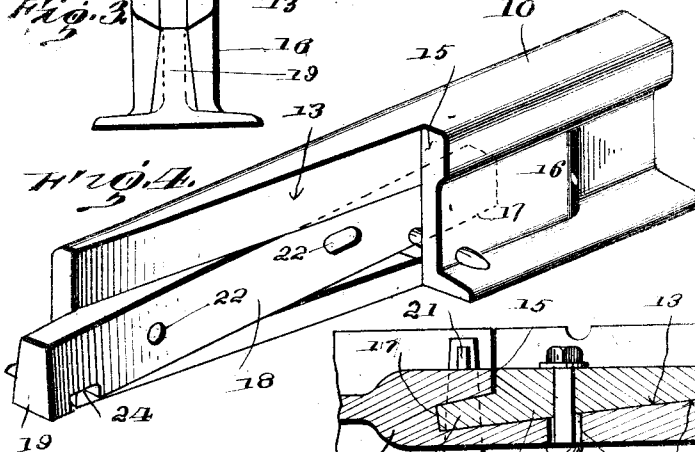
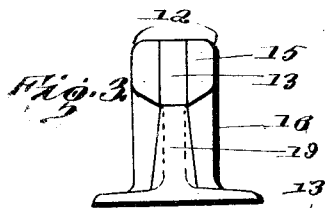
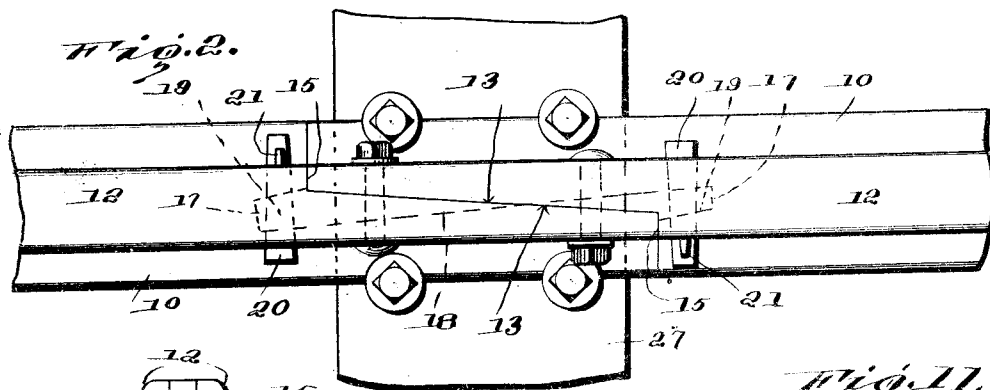
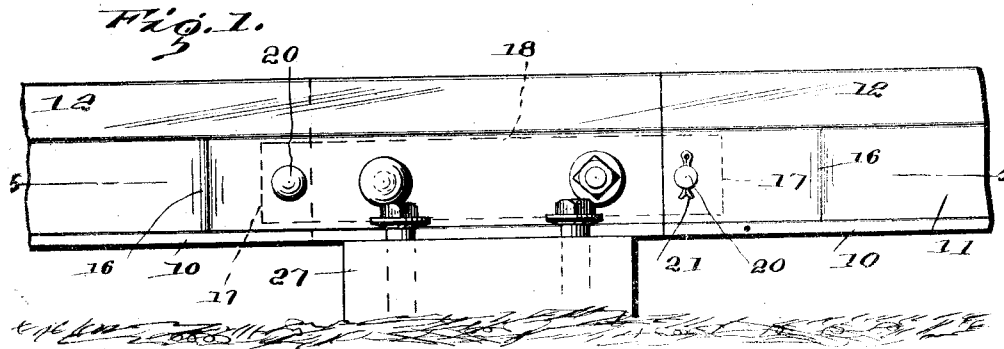


A. KURZAWSKEY.
RAIL JOINT.
APPLICATION FILED MAY 23, 1912.

1,050,666.

Patented Jan. 14, 1913.

2 SHEETS-SHEET 1.



Witnesses
Richard A. Peep
W. H. Woodson

By

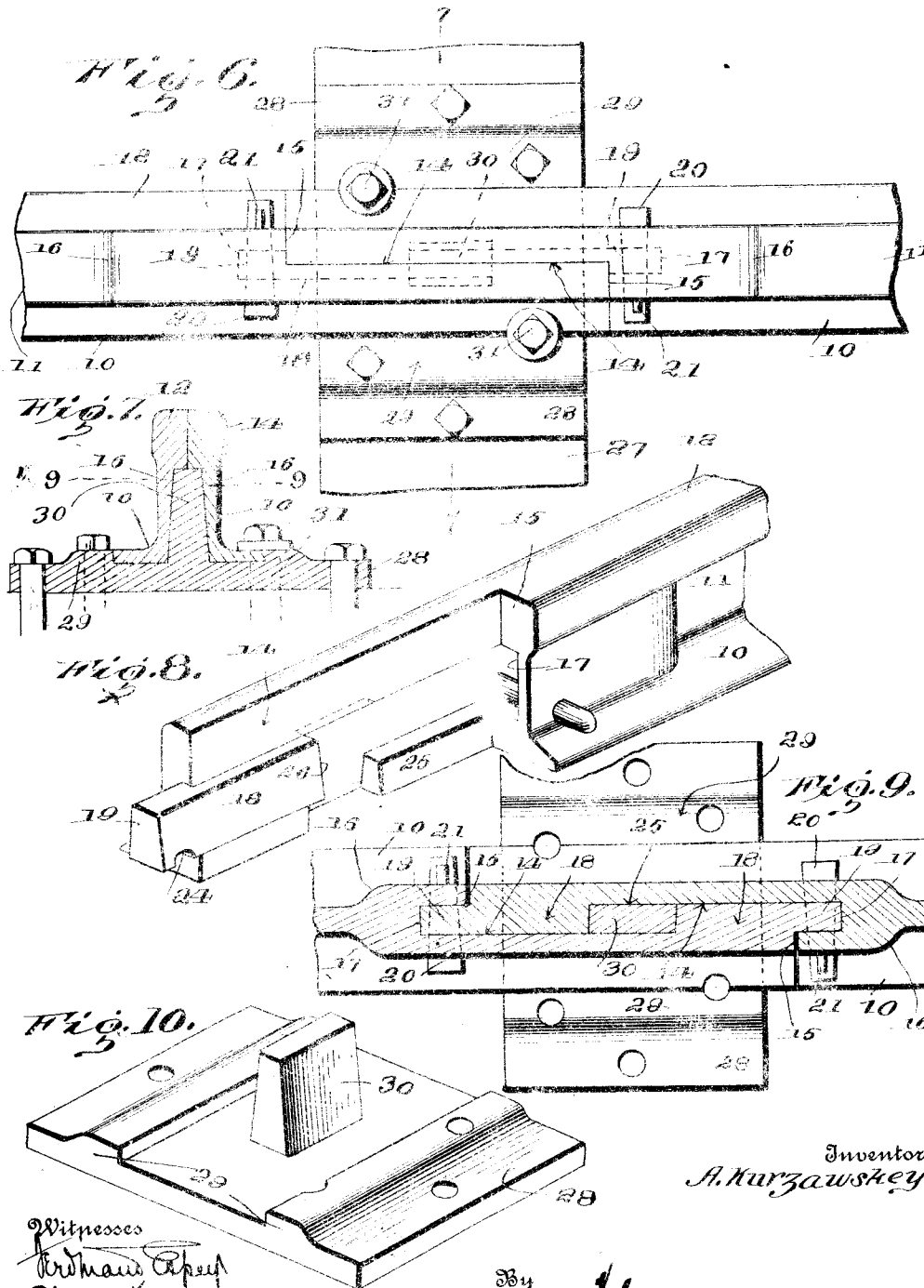
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2 SHEETS-SHEET 2.



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UNITED STATES PATENT OFFICE.

ALBERT KURZAWSKEY, OF NANTICOKE, PENNSYLVANIA.

RAIL-JOINT.

1,050,666.

Specification of Letters Patent.

Patented Jan. 14, 1913.

Application filed May 23, 1912. Serial No. 699,277.

To all whom it may concern:

Be it known that I, ALBERT KURZAWSKEY, citizen of the United States, residing at Nanticoke, in the county of Luzerne and State of Pennsylvania, have invented certain new and useful Improvements in Rail-Joints, of which the following is a specification.

This invention relates to improvements in rail joints, and has for one of its objects to improve the construction and increase the efficiency and utility of devices of this character.

Another object of the invention is to provide a device of this character having relatively small internal engagement, while at the same time capable of producing a very stiff and rigid joint.

Another object of the invention is to provide a simply constructed device whereby broken or impaired parts may be readily replaced without disturbing the other rails.

Another object of the invention is to provide a simply constructed device whereby provision is made for taking up slack in the joint and rigidly uniting the parts, and whereby wear may be "taken up" without disturbing the joint or separating the parts.

Another object of the invention is to provide a rail joint having the parts interchangeable or with the rails reversible end for end.

With these and other objects in view, the invention consists in certain novel features of construction as hereafter shown and described, and then specifically pointed out in the claims, and in the drawings illustrative of the preferred embodiment of the invention.

Figure 1 is a side elevation of the confronting ends of a pair of rails constructed in accordance with the invention; Fig. 2 is a plan view of the parts shown in Fig. 1; Fig. 3 is an end elevation of one of the rails; Fig. 4 is a perspective view of one of the rails at one end; Fig. 5 is a view in section on the line 5-5 of Fig. 1; Fig. 6 is a view similar to Fig. 2 illustrating a modification in the construction; Fig. 7 is a transverse section on the line 7-7 of Fig. 6. Fig. 8 is a perspective view of one of the rails at one end illustrating the modified form shown in Fig. 6; Fig. 9 is a section on the line 9-9 of Fig. 7; Fig. 10 is a perspective view of the supporting base or chair employed in the modified structure shown in

Figs. 6, 7, 8 and 9; Fig. 11 is a sectional detail illustrating another slight modification in the construction.

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

The body portions of the rails are of the usual form and of the usual length and comprise the tie flanges 10, vertical webs 11 and heads 12, and may be of any required dimensions. At their terminals the rails are reduced or cut away at one side as in the structure shown in Figs. 2 to 4, the inner face 13 of the cutaway portions inclined obliquely, while in the structure shown in Figs. 6, 7 and 8, the inner face 14 of the cutaway portion extends in the same longitudinal plane as the rail. By this means a transverse shoulder 15 is produced at the inner terminal of the inclined portions 13 and 14. The vertical web 11 is increased in thickness at the inner end of the inclined portion as represented at 16, and a cavity represented at 17 formed in the thickened portion of the web and opening outwardly or toward the end of the rail. The thickened portion of the vertical web is extended at one side in the form of a tongue 18 and projection beyond the terminal of the reduced portion. The projecting portion of the tongue is reduced in thickness as represented at 19 and preferably with its sides converging toward the upper edge, as shown.

In the structure disclosed in Figs. 1 to 5, the inner face of the tongue 18 is inclined obliquely to the longitudinal plane of the rail and reversely to the inclined face 13 of the reduced portion, as shown, while in the structure disclosed in Figs. 6, 7, 8 and 9 the inner face of the tongue extends parallel to the face 14, or in the same longitudinal plane as the rail. A tapered aperture is formed through the thickened portion of each vertical web and communicates with the recess or cavity 17, the lower half of the aperture being formed in the bottom of the recess. The tapered aperture is designed to receive a tapered bolt 20 having a keyway to receive a split key 21. The larger end of the bolt 20 extends from one side of the thickened portion 16 of the vertical web, while the key 21 bears against the opposite side of the thickened portion.

In the form of the structure illustrated in Figs. 1 to 5, the tongue 18 is provided with

spaced longitudinally slotted apertures 22 to receive clamp bolts and the projecting portion of the tongue is provided with a slotted transverse cavity 24 to receive the tapered bolt 20.

In the modification shown in Figs. 6, 7, 8 and 9 the tongue 18 is shorter than in the structure shown in Figs. 1 to 4, and a vertical cavity 25 is formed through the lower portion of the reduced part, while the cavity 17 is extended longitudinally and communicates with the cavity 25. By this means a transverse shoulder 26 is formed at the inner end of the tongue.

In the structure disclosed in Figs. 1 to 5, the rails bear directly upon the tie indicated at 27, while in the structure shown in Figs. 6, 7, 8 and 9, a supporting plate or chair 28 is employed beneath the joint portion of the rails and bearing upon the tie. The plate 28 is provided with upwardly directed stop ribs 29 to bear against the opposite edges of the tie flange. The chair or tie plate 28 is also provided with an upstanding stud 30 to enter the cavity 25 and tapered to correspond to the taper of the cavity. By this means the stud 30 bears by its ends against the shoulders 26 of the rails, and firmly unites and locks the parts in position and prevents lateral displacement. When the construction shown in Figs. 6 and 9 is employed, no transverse bolts are required through the vertical webs, but in lieu of such holding devices tap screws 31 or like devices are employed to bind the rails to the chair and to the tie.

The improved device is simple in construction, is strong and durable, and so arranged that the parts mutually coact to reinforce each other so that all lateral displacement is effectually prevented, and the parts firmly held and united. By this arrangement also the parts comprising the joint may be readily tightened in event of their working loose as will be obvious.

In the structure shown in Figs. 6, 7, 9 and 10 one of the tap screws 31 only is employed in engagement with the rails to prevent creeping while permitting the movement produced by the usual expansion and contraction.

In Fig. 11 a slight modification is shown in the construction consisting in forming the

tongue 18 shorter and wedge-shaped at its terminal and fitting in a relatively short recess 17. This construction may be employed under certain circumstances if required.

Having thus described the invention, what is claimed as new is:

1. A railway rail reduced laterally at the ends and with a cavity in the body of the rail at the juncture therewith of the reduced portion and with a tongue extending beyond the reduced portion, said rail having transversely alined apertures communicating with the cavities and with transverse recesses opening downwardly in the tongues, whereby when the rails are united end to end the reduced portions will engage face to face and the tongues enter the cavities, and fastening devices adapted to operate through the alined apertures and engaging in the recesses downwardly opening of the tongues.

2. A railway rail reduced laterally at the ends and with a cavity in the body of the rail at the juncture therewith of the reduced portion and with a tongue extending beyond the reduced portion, each of said reduced portions having an intermediate recess, whereby when the rails are united end to end the reduced portions will engage face to face and the tongues enter the cavities, and a chair member bearing beneath the rails and provided with a stud for engaging in the intermediate recesses.

3. A railway rail reduced laterally at the ends and with a cavity in the body of the rail at the juncture therewith of the reduced portion and with a tongue extending beyond the reduced portion, each of said reduced portions having an intermediate recess, said rail having transversely alined apertures communicating with the cavities and said tongues having transverse recesses, fastening devices adapted to operate through the alined apertures of the cavities and the recesses of the tongues, and a chair member bearing beneath said rails and provided with a stud for engaging in the intermediate recess.

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

ALBERT KURZAWSKEY. [L. s.]

Witnesses:

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H. M. MORGAN.