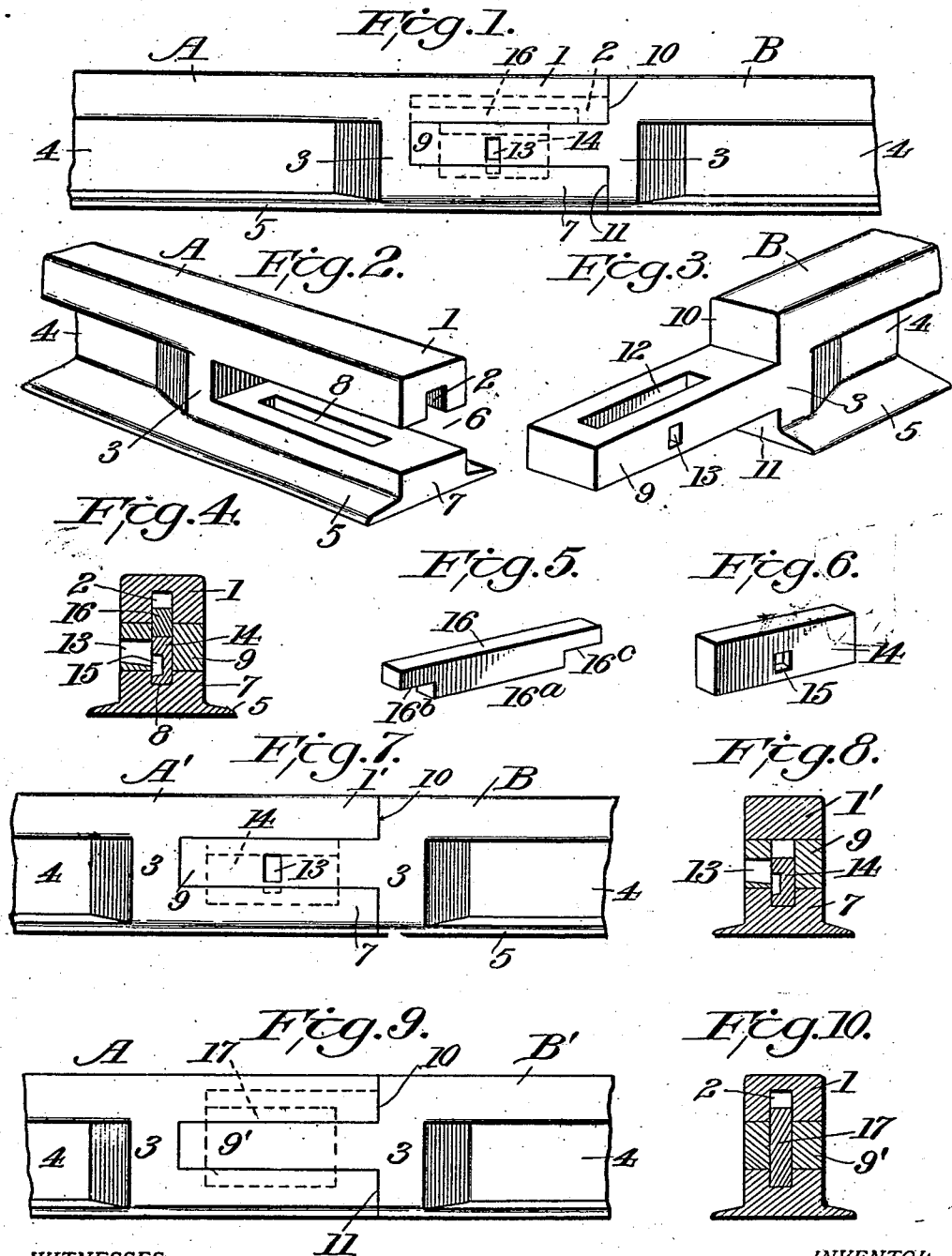


F. B. MARRIOTT.
RAIL JOINT.
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1,061,621.

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FRANCISCUS B. MARRIOTT, OF HOMEWOOD, ALABAMA.

RAIL-JOINT.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, FRANCISCUS B. MARRIOTT, citizen of the United States, residing at Homewood, in the county of Monroe and State of Alabama, have invented certain new and useful Improvements in Rail-Joints, of which the following is a specification.

My invention relates to rail joints, and more particularly to that type known as scarf joints, in which the rail ends are specially formed so as to interlock.

The object of the invention is to provide a joint which shall be absolutely safe and rigid, not liable to become loose, and in which the use of splice bars, bolts, etc., with all their attendant uncertainty shall be entirely eliminated.

A further object is to provide a joint of this character which can be readily uncoupled when desired, and in which the rails can be moved laterally to disconnect the same.

To this end, the invention consists in the construction and arrangement of parts hereinafter described, and illustrated in the accompanying drawings, in which:

Figure 1 is a side elevation of my complete rail joint, hidden parts being shown in dotted lines; Fig. 2 is a perspective view of the end of one of the rails; Fig. 3 is a similar view of the end of the other rail; Fig. 4 is a transverse central section through the complete joint; Figs. 5 and 6 are perspective views of sections of a locking block hereinafter described; Fig. 7 is a side elevation similar to Fig. 1 but showing a slightly modified construction; Fig. 8 is a transverse section through the modification shown in Fig. 7; Fig. 9 is a side elevation showing a still further modified arrangement; and, Fig. 10 is a transverse section through the joint shown in Fig. 9.

Referring to the drawings in detail, the meeting ends of the two rails are designated by the letters A and B, respectively. Each rail comprises the usual head 1, web 4, and base flange 5, and the web of each is preferably thickened adjacent the end until it is flush with the sides of the head, as indicated at 3. The thickened web of rail A is cut away between the head and base to form a horizontally extending slot 6, below which is the base 7. In this base 7 is formed a pocket 8 which extends downwardly from the slot 6 to a comparatively shallow depth, as shown in Fig. 4. In the under side of

the head 1 of rail A is formed a longitudinally extending groove 2 which lies directly over the pocket 8, and is of substantially the same width.

Projecting outwardly from the rail B is a tongue 9 which is of such thickness as to just fit into the slot 6, formed between the head and base of the rail A. Above and below the tongue 9 are shoulders 10 and 11, adapted to abut respectively with the ends of the head 1 and base 7 of the rail A. Extending vertically and centrally through the tongue 9 is an opening 12 of approximately the same dimensions as the pocket 8, and is so located with respect to the other parts that when the rails are fitted together, as shown in Fig. 1, the opening 12 is brought into registry with the pocket 8 and with the groove 2.

Adapted to fit loosely in the opening 12, groove 2, and pocket 8, is a locking block preferably formed of two sections 14 and 16. The section 14 is adapted to fit entirely within the opening 12, and the section 16 has a central portion 16^a which also fits within the opening 12 and rests upon the upper edge of the section 14, as clearly shown in Fig. 4. The section 16 is cut away at each end to form shoulders 16^b and 16^c, which are adapted to rest upon the upper surface of tongue 9, at each end of the opening 12.

In assembling the joint, the section 14 is placed in the opening 12, which it just fits, while the section 16 is placed in the groove 2 and temporarily held there by any suitable means. The tongue 9 is now inserted in the slot 6, by either a lateral or longitudinal movement of the rails. As soon as the rails are brought partially together, the sections 14 and 16 will be held in place during the remainder of the movement. Finally, when the parts are brought into the position shown in Fig. 1, in which the opening 12 exactly registers with the groove 2 and pocket 8, the locking block will fall by gravity into the position indicated in dotted lines. In this position the lower section 14 lies partially in the pocket 8 and partially in the opening 12, thus forming a rigid connection between the tongue 9 and base 7, while the upper section 16 lies partially in the opening 12 and partially in the groove 2, thus locking the head 1 and tongue 9 rigidly together.

In order that the rails may be separated when desired, I provide means for lifting

the locking block out of its operative position. To this end, the lower section 14 formed with an opening or pocket 15 in the side thereof, and an opening 13 is provided in the side of the tongue 9, so located as to register with the opening 15. It will therefore be seen that by inserting a key, or any pointed instrument, such as a pick, through the opening 13 and into the opening 15, both sections of the locking block may be lifted. When the lower section has been lifted clear of pocket 8, the upper section will have cleared the opening 12, and will lie wholly in the groove 2, so that the rails A and B can be moved laterally relative to each other, the upper and lower sections of the locking block slipping on one another as the lateral movement takes place. It will therefore be apparent, that by constructing the locking block in two sections and providing means for lifting it until the dividing line between the sections coincides with the dividing line between the head 1 and tongue 9, I accomplish the rigid locking of both the head and base sections of rail A and, at the same time, permit the rails to be separated laterally.

In some instances, it may be found unnecessary to lock both the head and base portions of rail A to the tongue 9, and in such cases I omit the groove 2 and form the head portion solid, as indicated at 1' in Figs. 7 and 8. With this arrangement, of course, the upper section 16 of the locking block is omitted, and an extremely simple construction results.

Where it is desired to connect the rails in such a manner that they cannot be taken apart, I provide a locking block 17 of a width equal to the combined widths of sections 14 and 16, but made in one solid piece. When using such a block the rails have to be united by moving them longitudinally together, and when so united it is obvious that they cannot be disconnected laterally. In this construction, I omit the openings 13 and 15 so that the block 17 cannot be lifted.

It will thus be seen that I have provided a boltless joint, the essential feature of which is an inclosed locking block which falls by gravity into operative position, and which, owing to the massiveness of the parts and the abutting shoulders 10 and 12, results in an exceptionally solid and rigid construction.

What I claim is:

1. In a rail joint, the combination of two abutting rail ends, the web of one rail being cut away to form a horizontally extending slot between the head and base thereof, and the end of the other rail being provided with a projecting tongue adapted to fit into said slot, said tongue having a vertically

disposed opening extending therethrough, and the base of said first mentioned rail having a pocket extending downwardly thereinto from the said slot, and a block loosely fitting into the opening in said tongue, and adapted to drop partially therethrough into said pocket and thus lock said rails together when the opening in the tongue is brought into registry with said pocket.

2. In a rail joint, the combination of two abutting rail ends, the web of one rail being cut away to form a horizontally extending slot between the head and base thereof, and the end of the other rail being provided with a projecting tongue adapted to fit into said slot, said tongue having a vertically disposed opening extending therethrough, the base of said first mentioned rail below the slot having a pocket extending downwardly thereinto, and the head of such rail having a groove extending along the under side thereof directly over said pocket, and a block loosely fitting into the opening in said tongue, and adapted to drop partially therethrough into said pocket when said opening and pocket are brought into registry, and thus lock the rails together, said block being divided horizontally to form upper and lower sections, the upper section, when in locking position, lying partially in said pocket, and partially in said groove, and means for lifting said lower section out of said pocket, and forcing said upper section wholly into said groove so that said tongue may be slipped laterally out of said slot, and the rails thus disconnected.

3. In a rail joint, the combination of two abutting rail ends, the web of one rail being cut away to form a horizontally extending slot between the head and base thereof, and the end of the other rail being provided with a projecting tongue adapted to fit into said slot, said tongue having a vertically disposed opening extending therethrough, and the base of said first mentioned rail having a pocket extending downwardly thereinto from the said slot, and a block loosely fitting into the opening in said tongue, and adapted to drop partially therethrough into said pocket and thus lock said rails together when the opening in the tongue is brought into registry with said pocket, and means for lifting said block out of said pocket so that said rails may be separated by a relative lateral movement.

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

FRANCISCUS B. MARRIOTT.

Witnesses:

D. D. COLE,

I. L. NORTHROP.