

W. T. LINDSAY.

RAIL JOINT.

APPLICATION FILED JUNE 14, 1912.

1,058,875.

Patented Apr. 15, 1913.

2 SHEETS—SHEET 1.

Fig. 1.

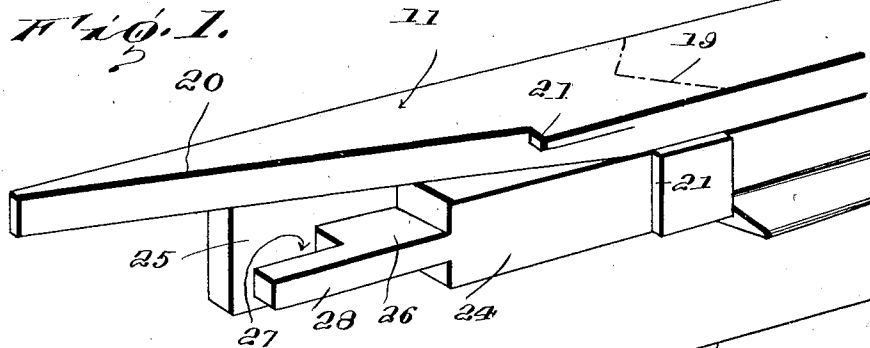


Fig. 2.

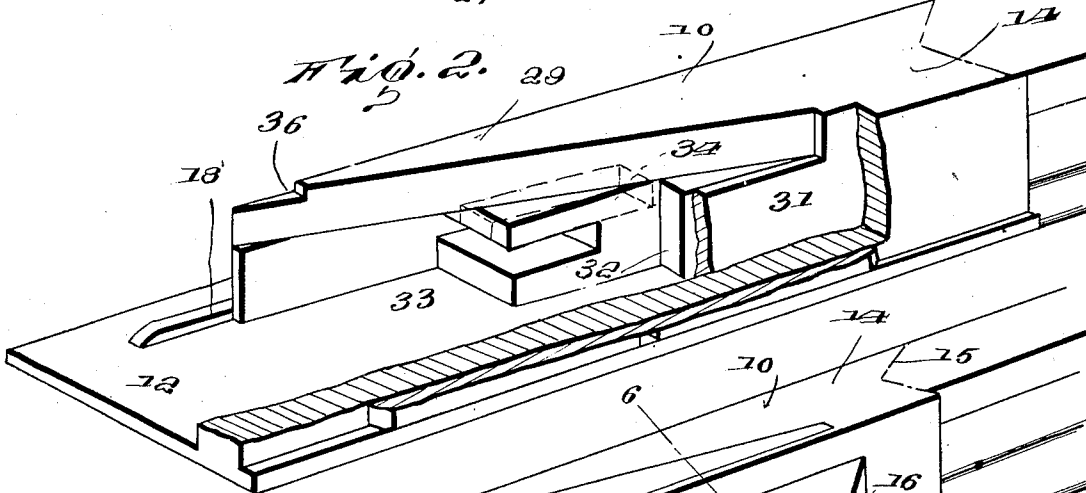
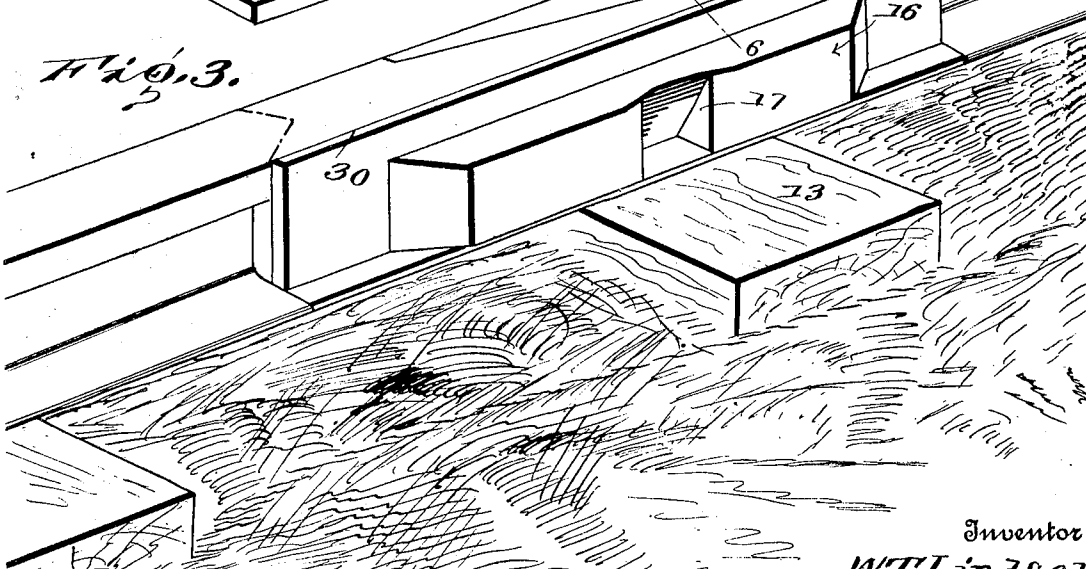


Fig. 3.



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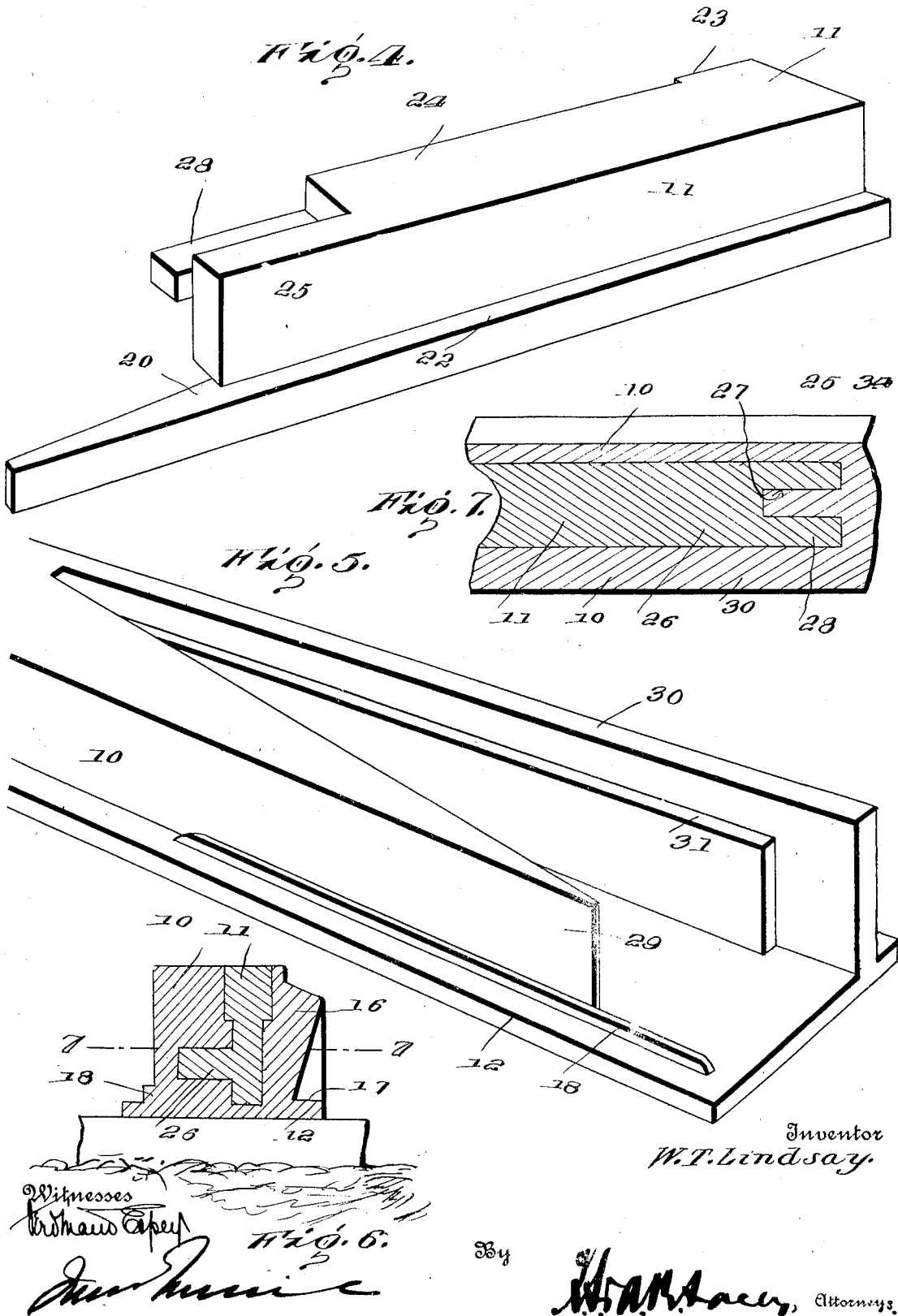
Attorneys.

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Fig. 6.

UNITED STATES PATENT OFFICE.

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RAIL-JOINT.

1,058,875.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, WILLIAM T. LINDSAY, citizen of the United States, residing at Chattanooga, in the county of Hamilton and State of Tennessee, have invented certain new and useful Improvements in Rail-Joints, of which the following is a specification.

My invention relates to new and useful improvements in rail joints and more particularly to that type known as "scarf" joints, and the object of my invention is to provide a rail joint which will absolutely dispense with all bolts, fish plates and other fastening devices now in common use.

A further object of my invention is to provide a rail joint including two interlocking members each formed from a single piece of metal and each adapted to be welded to the abutting ends of adjacent rails. And a still further object of my invention is to so form and position the interlocking members or fingers of the joint that certain of the interlocking members will also act as centering members for bringing the rails into positive alinement.

With these and other objects in view, my invention will be more fully described, illustrated in the accompanying drawings and then specifically pointed out in the claims which are attached to and form a part of this application.

In the drawings thus employed: Figure 1 is a perspective view of the inner side of one of the joint members, clearly showing the locking fingers; Fig. 2 is a similar view of the other joint member, part of the outer wall being broken away to show the recesses formed for the reception of the locking fingers of the first member; Fig. 3 is a perspective view of the complete rail joint; Fig. 4 is a perspective view of the member shown in Fig. 1 but looking at its opposite side, the member being shown in inverted position; Fig. 5 is a perspective view of the member shown in Fig. 2 looking at it from the opposite side; Fig. 6 is a transverse section on the line 6—6 of Fig. 3; Fig. 7 is a fragmentary longitudinal section on the line 7—7 of Fig. 6.

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 preferred embodiment of my invention as clearly shown in Fig. 3 of the draw-

ings, includes coacting locking members 10 and 11 which are welded to the abutting ends of adjacent rails. Each of these body members is cast or otherwise formed in a single piece and the locking members are preferably welded to the rail ends before the rails are put upon the market.

As my improved form of rail joint absolutely dispenses with bolts, fish plates and the like, it will be apparent that the rails when properly equipped with my locking members may be laid with great rapidity and ease and are therefore particularly well adapted for rush work or for laying temporary tracks during construction work.

One of the members 10 includes a base plate 12 which in use seats upon a tie 13. Formed integrally with this plate, is a block 14 which is equal in height to the height of a rail and which is somewhat greater in width than the width of the head of the rail. This block extends longitudinally of the plate and is preferably provided at one end with a vertical notch or mortise adapted to receive one end of a rail, which end is beveled and welded to the block as indicated by dotted lines at 15. One side of the body member is strengthened by an integrally formed brace 16 which extends flush with the edge of the plate 12, and throughout the greater portion of the length of the block and the ends of which merge into the body member. This brace is cut away centrally as shown at 17 to form a seat for the head of a spike used for securing the joint to the tie. The opposite side of the block is strengthened by a brace 18 which does not extend quite to the edge of the plate, leaving an extending shoulder for the reception of additional spikes. The other member 11 consists of a substantially rectangular shaped block of metal equal to a rail in height and thickness and having one end notched or mortised for welded connection to the beveled end of a rail, as indicated at 19. This block is cut away at one side to provide a wedge-shaped locking member which also serves as a centering member, as will be hereinafter explained, and a portion of the block at the base of said member is left intact to form a lateral shoulder 21. The opposite side of the block is also cut away to furnish a longitudinally extending overhanging shoulder 22. The block is further reduced to form a vertical shoulder 23 and is cut short intermediate the length of the wedge-

shaped member to form a substantially rectangular shaped locking member or tenon 24, the body proper of the block therefore terminating short of the thin end of the wedge member 20. The upper and lower portions of this tenon 24 are cut away at one side to provide a longitudinally extending vertical locking finger 25 and a centrally formed, longitudinally extending, horizontal locking finger 26 which latter, is cut away throughout a portion of its length as shown at 27 to form a spaced locking finger 28. The other member 10 has its block recessed to form a wedge-shaped locking member 29 which also acts as a centering member, coacting with the wedge-member 20, and a longitudinally extending side wall 30 which when the members are united bears against the outer face of the wedge member 20. This wall is provided with an interiorly formed shoulder 31 which engages beneath the shoulder 22, and the end of which abuts against the vertical shoulder 23. The block 14 is further recessed at 32, 33 and 34 to receive the locking members or fingers 25, 26 and 28, the outstanding portion 35 so formed, seating in the recessed portion 27 of the finger 26.

The free terminal of the wedge member 29 is cut away as at 36 to form a seat for the lateral shoulder 21 of the block 11. The extended end of the brace 18 bears against the inner side of the end of the block 11 to assist in forming a rigid joint.

From the foregoing description, taken in connection with the drawings, the application and operation of my improved rail fastener will be readily understood and but slight description of the same is therefore necessary.

As previously set forth the locking members are preferably welded to the ends of the rails before the rails are put on the market and when laying the track it is only necessary to properly position the ties upon the roadbed, place the rails end to end upon the ties in such a manner that the end 10 of one rail is adjacent the end 11 of the next and then move the rails to bring the tenon or locking fingers of the one into the mortise of the other. This movement to locking position is greatly facilitated by the wedge-shaped members 20 and 29 which as will be readily understood, act as centering members to bring the rails into proper alinement with each other. The seating of the shoulder 22 upon the shoulder 31 relieves the plate 12 from considerable of the downward pressure which would otherwise be exerted thereon.

The tenon 24 is of sufficient size to rigidly hold the members together and the locking members 25 and 26 lying in planes at right angles to each other, stiffen the joint against either vertical or lateral movement.

From the foregoing description it will be apparent that I have provided a simple and efficient form of rail joint and one which because of the ease in laying the rails, is particularly applicable for use in laying temporary tracks. It will be understood however that I do not wish in any way to limit the joint for use upon temporary tracks, as it may be used with equal advantage in the laying of permanent tracks of all descriptions.

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

1. A rail joint including members adapted to be secured upon abutting rail ends, one of said members being formed with a wedge-shaped locking arm forming a centering member and with tenons or locking fingers at right angles to each other, the other of said members being recessed to provide a wedge-shaped locking arm coacting with that of the first member and a wall spaced therefrom and having an interiorly formed shoulder, said member being further recessed to form mortises at right angles to each other for the reception of the locking fingers of the first member, the wedge-shaped member of the first locking member being formed with an exteriorly formed shoulder adapted to engage with the interiorly formed shoulder of the spaced wall of the second member.

2. A rail joint including members adapted to be secured upon abutting rail ends, one of said members being formed with a wedge-shaped locking arm forming a centering member, the other of said members being recessed to provide a wedge-shaped locking arm co-acting with the arm of the first member, and a wall spaced therefrom.

3. A rail joint including abutting rail ends, one of which is provided with a wedge-shaped locking arm and the other of which is provided with a wedge-shaped locking arm and a wall spaced from its locking arm, said wall being provided interiorly with a shoulder.

4. A rail joint including members adapted to be secured upon abutting rail ends, one of said members being formed with a wedge-shaped locking arm forming a centering member, the outer portion of said arm being under-cut to provide an overhanging shoulder, the other of said members being recessed to provide a wedge-shaped locking arm co-acting with that of the first member, and a wall spaced therefrom and having an interiorly formed shoulder upon which the overhanging shoulder of the first member seats.

5. A rail joint including members adapted to be secured upon abutting rail ends, one of said members being recessed to provide a wedge-shaped locking arm and a wall spaced from said arm, the other of said

members being provided with a wedge-shaped locking arm adapted for insertion between the locking arm and wall of the first member.

5 6. A rail joint including members adapted to be secured upon abutting rail ends, one of said members being formed with a wedge-shaped locking arm and with a vertical wall extending longitudinally beneath the arm, and with a tenon extending inwardly at right angles from said wall, the other of said members being recessed to provide a wedge-shaped arm and a spaced wall between which the wedge-shaped arm and wall of the first member engage and being further recessed to receive the tenon of the first mentioned member.

10 7. A rail joint including members adapted to be secured upon abutting rail ends,

one of said members being formed with a 20 wedge-shaped locking arm, a wall extending longitudinally beneath the arm and a tenon extending inwardly at right angles from the wall and cut away to space its forward end from the wall, the other of said members being recessed to provide a wedge-shaped locking arm, and a wall spaced from the arm and further recessed to seat the tenon of the first member when said first member is positioned with its arm and wall between the 30 arm and wall of the second member.

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

WILLIAM THOMAS LINDSAY. [L. s.]

Witnesses:

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