

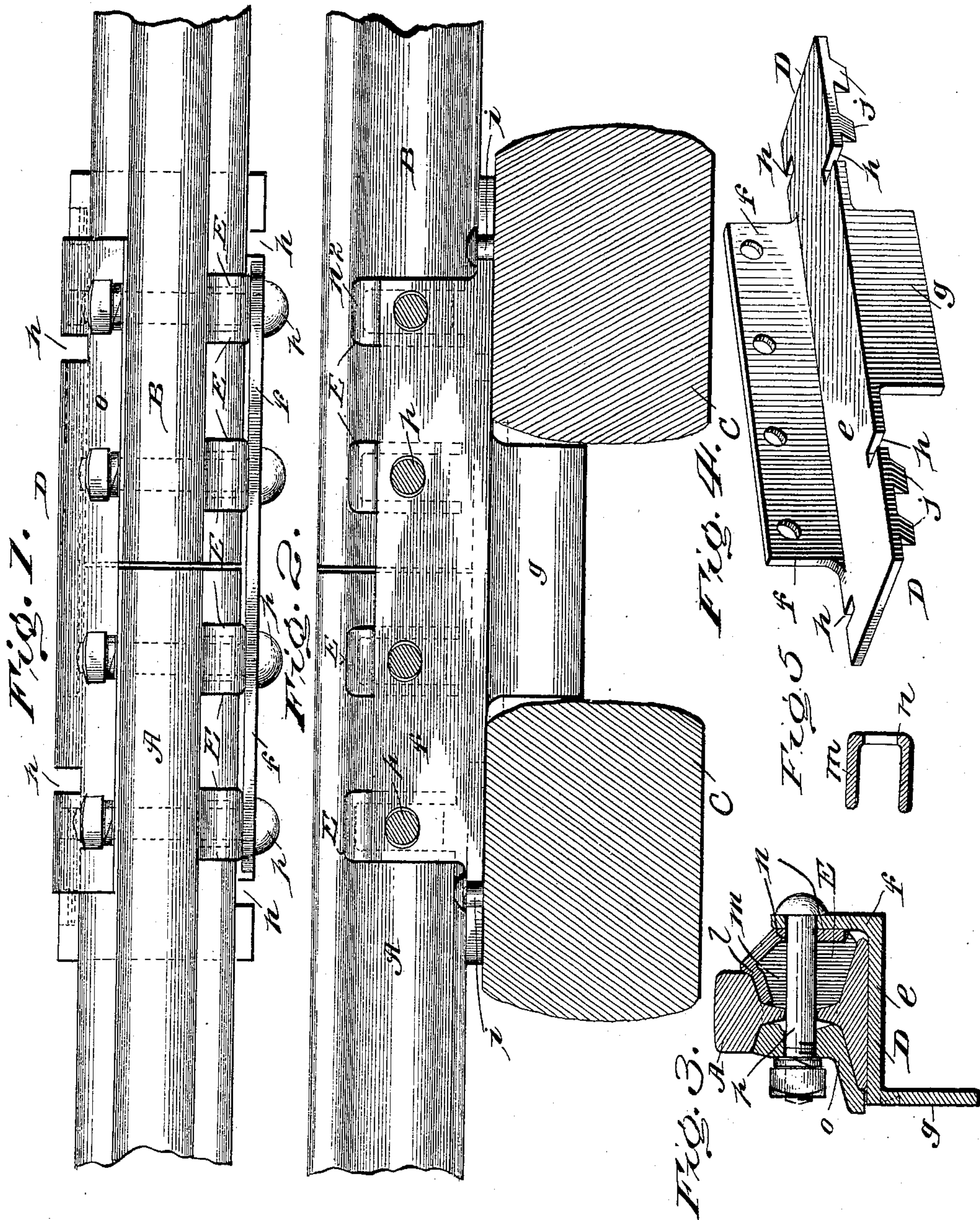
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Patented Oct. 4, 1898.

O. E. SELBY.
RAILWAY RAIL JOINT.

(Application filed Jan. 20, 1898.)

(No Model.)



Witnesses.

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RAILWAY-RAIL JOINT.

SPECIFICATION forming part of Letters Patent No. 611,945, dated October 4, 1898.

Application filed January 20, 1898. Serial No. 667,277. (No model.)

To all whom it may concern:

Be it known that I, OSCAR E. SELBY, a citizen of the United States, residing at Louisville, in the county of Jefferson and State of Kentucky, have invented certain new and useful Improvements in Railway-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.

My invention relates to improvements in railway-rail joints; and its primary object is to provide a simple and effective device of this class combining simplicity in construction with strength, durability, and rigidity.

The detailed objects and advantages of the invention will appear in the course of the subjoined description.

With the accomplishment of these ends in view the invention consists in certain novel features of construction, combination, and arrangement of parts, as will be hereinafter more fully described, and particularly pointed out in the appended claims.

In the drawings hereto annexed and forming a part of this specification, Figure 1 is a top plan view showing the meeting ends of two adjoining rails and my invention applied thereto. Fig. 2 is an outer side elevational view of the same and a cross-section of two adjacent ties on which the rails are mounted. Fig. 3 is a cross-sectional view. Fig. 4 is a perspective view of the Z-joint plate. Fig. 5 is a sectional plan view of a filling-brace.

Referring now more particularly to said drawings, A B represent the meeting ends of two adjoining rails, and C the cross-ties.

The improved joint consists of a horizontally-arranged joint-plate D, the horizontal web or body portion *e* of which rests upon the ties and forms a base-support for the rail ends. The vertical upwardly and downwardly projecting flanges *f g* of this plate are arranged at opposite sides thereof and on the outer and inner sides, respectively, of the rails, as shown. The flange *g* is centrally located and is made shorter than the flange *f*, so that it will fit down between the ties, as shown in Fig. 2, and serve as a girder, stiffening the inside edge of the horizontal web *e*. The ends of the horizontal web or body

portion of the plate are extended beyond the flanges and formed in their side edges with slots or notches *h* for passage of spikes *i*, which secure the same to the ties, and also on the inner side thereof with claws or spurs *j*, which enter the ties.

Arranged between the outer flange *f* and the vertical web *k* of the rail are filling-braces E, which bear against the upper side of the outer lateral base-flange of the rail, the under and outer side of the rail-head, and the inner side of the flange *f*. Each filling-brace is formed from one piece of metal, with an inclined upper face *l*, with two lateral vertical flanges *m*, shaped to fit the rail-section, and a vertical web *n* to bear against the flange *f* and having a hole for the bolt *p*.

On the inner side of the rail is an angle splice or fish plate *o* of ordinary construction. Bolts *p* pass through the flange *f*, filling-braces E, angle-plate *o*, and vertical webs of the rails and rigidly unite said parts. The filling-braces are preferably made of pressed steel, and they serve to support the heads of the rails and hold them in line.

It will be seen by the construction and arrangement of parts above described that the flange *f* and angle-plate *o* form the outer and inner splices or ties and that the construction of joint-plate with horizontal web, constituting a base-support for the rail ends and vertical flanges, gives the stiffness of a girder and provides a joint of great strength and durability. The joint-plate in cross-section is approximately of Z form, as shown in Fig. 3.

I desire it understood that changes in the form, proportion, and minor details of construction may be made within the scope of the invention without departing from the spirit or sacrificing any of the advantages thereof.

Having thus fully described my invention, what I claim as new and useful, and desire to secure by Letters Patent, is—

1. In a rail-joint, a Z-shaped joint-plate comprising in its construction a horizontal web or body portion forming a base-support for the rails, a straight, vertical, upwardly-projecting tie-flange at one side thereof, and a straight, shorter, downwardly-projecting flange at the opposite side adapted to fit down between adjacent ties, said flanges being of

less length than the plate and arranged in parallel vertical planes, and the projecting ends of said plate being formed with spike-openings, substantially as described.

5 2. In a rail-joint, a Z-shaped joint-plate comprising in its construction a horizontal web or body portion forming a base-support for the rails and provided in its opposite side edges with spike-openings, a straight, vertical
10 cal upwardly-projecting tie-flange at one side thereof, a straight, shorter, downwardly-projecting flange at the opposite side adapted to fit down between adjacent ties, said flanges being of less length than the plate and ar-
15 ranged in parallel vertical planes, and downwardly-projecting spurs on the projecting ends of the body portion of the plate adjacent to said downwardly-projecting flange, substantially as described.

20 3. In a rail-joint, the combination with the rails and cross-ties, of a joint-plate having a horizontal web or body portion secured to the ties and provided at one side with a vertical, upwardly-projecting flange arranged on one
25 side of the rails and at the other side with a downwardly-projecting flange extending down between adjacent ties, filling-braces between the upwardly-projecting flange and rails and bearing against the under side of

the heads of the rails, an independent fish or splice plate on the opposite sides of the rails from said upwardly-projecting flange, and means for uniting said flange, filling-braces, splice-plate and rails, substantially as described.

35 4. In rail-joints, the combination with the rails and cross-ties, of a joint-plate having a horizontal web or body portion secured to the ties and formed with spurs or claws to enter said ties, and provided at one side with a ver-
40 tical upwardly-projecting flange arranged on one side of the rails and at the other side with a downwardly-projecting flange extending down between the adjacent ties, filling-braces between the upwardly-projecting
45 flange and rail, bearing against the head of the rail, and independent splice-plate on the opposite sides of the rails from said upwardly-projecting flange, and bolts uniting said
50 flange, filling-braces, splice-plate and rails, substantially as described.

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

OSCAR E. SELBY.

Witnesses:

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