

C. R. GRAY.
RAIL JOINT.

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1,056,661.

Patented Mar. 18, 1913.

Fig. 1.



Fig. 2.

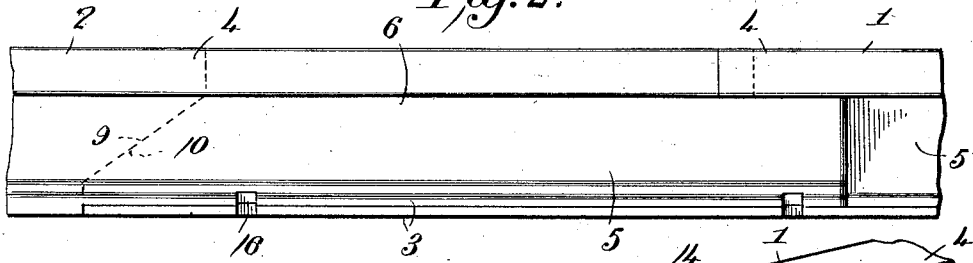


Fig. 3.

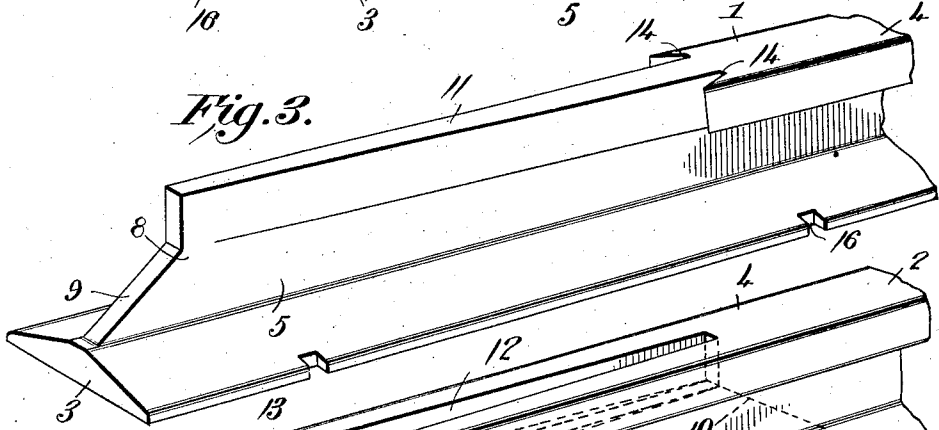


Fig. 4.

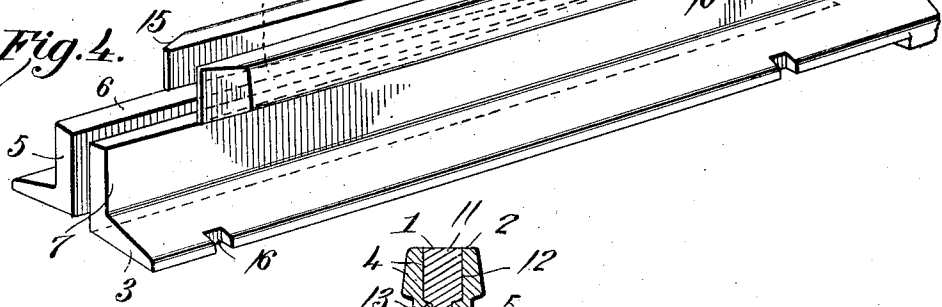
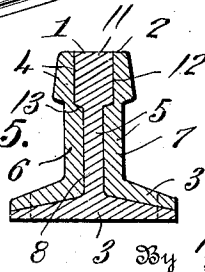


Fig. 5.



Witnesses

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UNITED STATES PATENT OFFICE.

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RAIL-JOINT.

1,056,661.

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To all whom it may concern:

Be it known that I, CHARLES R. GRAY, a citizen of the United States, residing at Sakonnet Point, in the county of Newport and State of Rhode Island, have invented new and useful Improvements in Rail-Joints, of which the following is a specification.

This invention relates to rail joints, the object in view being to do away with the bolts and nuts now commonly employed, and incidental liability of the same becoming displaced, and to provide in lieu thereof a novel construction of scarf joint, by means of which the two rail ends are effectively interlocked, when slid longitudinally into engagement with each other, the rail ends when in their final position being held by the usual spikes which engage registering notches in the bases of the overlapping rail ends.

With the above and other objects in view, the invention consists in the construction, combination and arrangement of parts, as will be hereinafter more fully described, illustrated in the accompanying drawings, and pointed out in the claim hereunto appended.

In the drawings: Figure 1 is a plan view of a rail joint, embodying the present invention. Fig. 2 is a side elevation of the same. Fig. 3 is a perspective view of one rail end. Fig. 4 is a perspective view of the other rail end. Fig. 5 is a central cross section through the joint.

Referring to the drawings, 1 and 2 designate two rail ends, each of which comprises a base 3, head 4, and web 5. The rail end 2 is provided with a double web, comprising the oppositely located parallel portions 6 and 7, with sufficient space left between said portions 6 and 7 to admit the single web end portion 8 of the other rail end, so that when the webs are in engagement with each other, any lateral deflection of the rail ends is prevented. The single web 8 has its end beveled, as shown at 9, while the inner

end of the space between the portions 6 and 7 of the double web terminates in an inclined or beveled shoulder 10, against which the beveled edge 9 abuts.

The rail end 1 has the head thereof cut away at opposite sides, as shown, to leave a long tapering tongue 11, while the head of the opposite rail end is centrally recessed, as shown at 12, to receive the tongue 11, the recess 12 extending downwardly to the double web, so as to leave long narrow shoulders 13, upon which the opposite edges of the tongue 11 rest, when the two rail ends are brought into their final interlocked relation. The head of the rail end 1 is also provided with notches 14, located at opposite sides of the tapering tongue 11, said notches having their outer walls inclined, as shown, so as to receive the corresponding wedge-shaped extremities 15 of the head of the rail 2, thereby preventing any spreading of the two portions of the rail head at opposite sides of the slot or recess 12.

In addition to the above interlocking features, the base flanges of one rail are offset in an upward direction so as to overlap and rest upon the base flanges of the other section or rail end, and both flanges are provided with registering notches 16 to receive the usual spikes, by means of which the rail ends are securely fastened to the ties. Any number of said notches 16 may be employed in accordance with the number of spikes found necessary to securely hold the rails to the ties.

By means of the construction above described, all bolts and nuts are done away with, and at the same time, the rail ends are thoroughly connected together and braced against movement in any direction, thus requiring very little attention on the part of the men now required to look after the rail joints, by reason of the presence of the bolts and nuts referred to.

What is claimed is:—

A boltless rail joint, comprising two rail ends, each embodying a base, a head, and

a web, the web of one rail being double to receive the single web of the other rail, the head of one rail having a tapered tongue fitting into a recess of corresponding shape in the head of the other rail and resting on the double web thereof, and the base of one rail being arranged to overlap and bear upon the base of the other rail, and the

bases of both rails having registering spike notches.

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

CHARLES R. GRAY.

Witnesses:

FRANK F. GRINNELL,
EMMA R. GRAY.

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