No. 877,007. PATENTED JAN. 21, 1908.

J. A. SCOTT.

RAIL JOINT.

APPLICATION FILED DEC. 18, 1906.

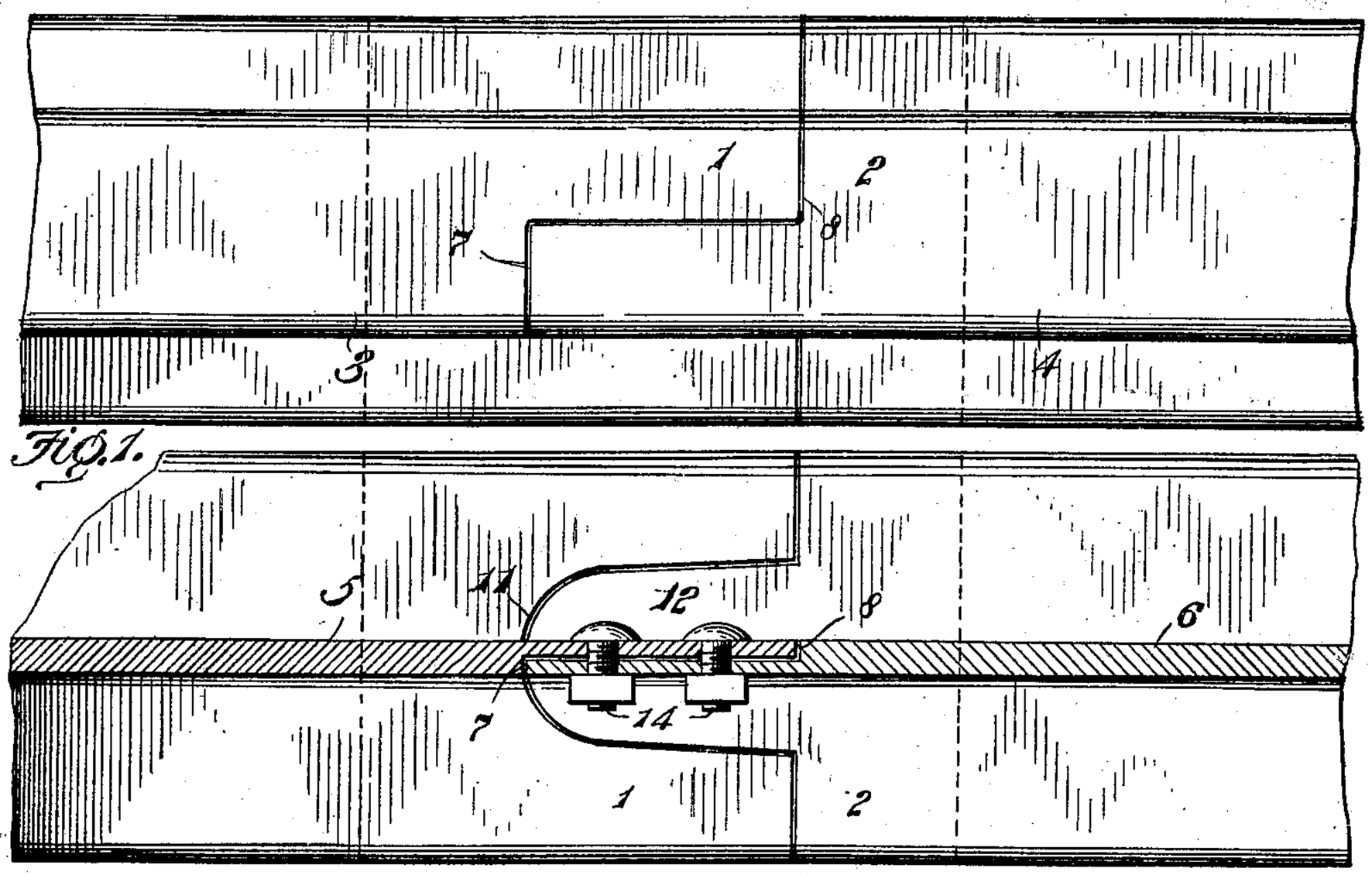

FIG. 1.

FIG. 2.

FIG. 3.

FIG. 4.

FIG. 5.

J. A. Scott, Inventor.

Witnesses
J. Howard Bishop.
H. C. Fitzpatrick

By E. G. Siggers.
Attorney

UNITED STATES PATENT OFFICE.

JAMES AUGUSTUS SCOTT, OF ST. LOUIS, MISSOURI.

RAIL-JOINT.

No. 877,007. Specification of Letters Patent. Patented Jan. 21, 1908.

Application filed December 18, 1906. Serial No. 348,441.

To all whom it may concern:

Be it known that I, JAMES AUGUSTUS SCOTT, a citizen of the United States, residing at St. Louis and State of Missouri, have invented a new and useful Rail-Joint, of which the following is a specification.

The invention relates to improvements in rail joints.

The object of the present invention is to improve the construction of rail joints, and to provide a simple, inexpensive and efficient one of great strength and durability, adapted to dispense with fish plates, and capable of preventing the noise and jar incident to the passage of the wheels of a train over a rail joint, having the abutting ends of the rails arranged in the ordinary manner.

A further object of the invention is to provide a rail joint of this character, adapted to prevent the rails from spreading should the connecting bolts become broken.

With these and other objects in view, the invention consists in the construction and novel combination of parts hereinafter fully described, illustrated in the accompanying drawing, and pointed out in the claims hereto appended: it being understood that various changes in the form, proportion, size and minor details of construction, within the scope of the claims, may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawing:—Figure 1 is a plan view of a rail joint, constructed in accordance with this invention. Fig. 2 is a horizontal sectional view of the same. Fig. 3 and 4 are detail perspective views, showing the rail ends. Fig. 5 is a detail longitudinal sectional view, illustrating the arrangement of the bottom plate.

Like numerals of reference designate corresponding parts in all the figures of the drawing.

1 and 2 designate rail ends, which are fitted together, are overlapped and interlocked to prevent them from moving vertically or laterally on each other. The overlapped portions of the heads 3 and 4 and webs 5 and 6 are provided at their inner abutting faces with vertical recesses 7 and 8, having their longitudinal walls disposed along the median line of the rails and provided with inner abutting shoulders 9 and 10, located at opposite sides of the rail joints. The inner shoulder 9, which is disposed transversely of the rail joint, abuts against the end of the other rail, and the shoulder 10 of the latter abuts against the end face of the rail end 1. This recessing and overlapping of the rail ends 1 and 2 prevent the same from moving laterally on each other, and they also present practically a continuous tread, so that the wheels of a train may pass over a rail joint without the noise and jar incident to the wheels of a train passing over an ordinary rail joint.

The recessed web and head of each rail end extend to the extreme end of the rail, and have their end edges arranged in the same vertical plane. The bottom flanges or rather the bottom of the rail end 1 is provided with an inwardly extending tapering recess 11, extending beneath the web 5 and adapted to receive a tongue 12 of the other rail end 2. The bottom flanges of the rail 2 are recessed at opposite sides to provide the centrally arranged tongue, which extends to the end of the rail. The tapering recess 11 has its inner end rounded, and the outer end of the tongue 12 is correspondingly rounded to fit the recess 11. When the rail ends 1 and 2 are fitted together, the tongue 12 extends into the recess 11 and lies below the lower edge 13 of the over-hanging portion of the web 5, whereby the rail end 2 is held against vertical movement on the rail end 1. When the parts are fitted together and interlocked in this manner, the rails will be effectually prevented from spreading.

The rail ends 1 and 2 are secured in their interlocked relation by transverse bolts 14, which pierce the recessed overlapped portions of the webs, as clearly illustrated in Fig. 2 of the drawing. The bolts are provided with nuts, which in practice, will be held against rotary movement by suitable nut locks.

The bottom plate 15 is arranged beneath the overlapped end portions of the bottom of the rails and is secured to the same by screws 16, or other suitable fastening devices. The bottom plate may be arranged upon a cross tie, or it may be located between the cross ties.

It will be seen that the rail joint, which is simple and comparatively inexpensive in construction, is adapted to dispense with the fish plates of an ordinary rail joint, and that it prevents noise and rattling when the wheels of a train pass over it. Also it will be

clear that the interlocking of the rails will prevent the same from spreading, should the connecting bolts become broken.

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

1. A rail joint comprising rail ends provided at their heads and webs with similar vertical recesses and overlapped, one of the rail ends being provided in its bottom flanges with a central longitudinal recess lying below the web portion of such rail end, and the other rail end having its bottom flanges recessed at opposite sides to provide a longitudinal tongue extending laterally from the web of such rail end and fitting in the said longitudinal recess and engaging the lower edge of the web of the other rail end.

2. A rail joint comprising rail ends having their heads and web portions recessed and overlapped, the end edges of the head and web of each rail being arranged in the same vertical plane, one of the rail ends being provided in its bottom with a longitudinal recess extending beneath the web of such rail, and the other rail end being provided with a tongue extending to the end of such rail and fitting in the recess of and extending beneath and engaged by the web of the other rail end, and means for securing the rails together.

3. In a rail joint, the combination of rail ends having their heads and webs recessed and overlapped, one of the rail ends being provided at its bottom flanges with a central longitudinal recess lying below the web portion of such rail end, and the other rail end having its bottom flanges recessed at opposite sides to provide a longitudinal tongue extending laterally from the web of such rail end and fitting in the said longitudinal recess and engaging the lower edge of the web of the other rail end, a bottom plate extending beneath the overlapped portions of the rails, and fastening devices piercing the bottom plate and securing the same to the said tongue.

In testimony, that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

JAMES AUGUSTUS SCOTT.

Witnesses:

ARTHUR EDWARDS,

JAMES A. DUNLAP.