

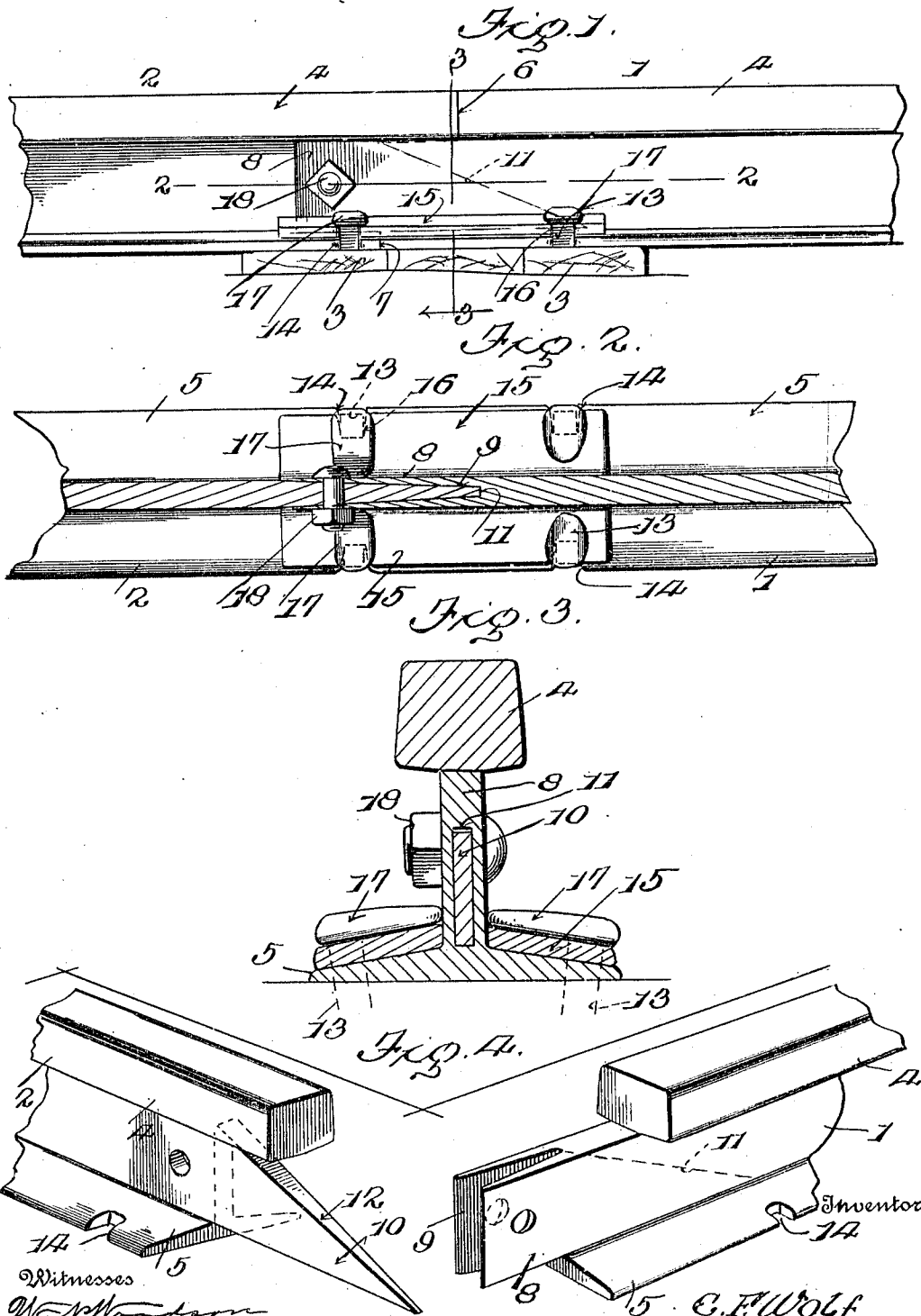
C. F. WOLF.

RAIL JOINT.

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956,014.

Patented Apr. 26, 1910.



Witnesses
W. W. Woodson,
Joanna M. Fallin,

By

C. F. Wolf
Attorney.

UNITED STATES PATENT OFFICE.

CHARLES F. WOLF, OF SOUTHWICK, IDAHO.

RAIL-JOINT.

956,014.

Specification of Letters Patent. Patented Apr. 26, 1910.

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To all whom it may concern:

Be it known that I, CHARLES F. WOLF, citizen of the United States, residing at Southwick, in the county of Nez Perce and State of Idaho, have invented certain new and useful Improvements in Rail-Joints, of which the following is a specification.

The present invention comprehends certain new and useful improvements in rail joints, and the invention has for its object a particularly efficient device of this character which is arranged to obviate the jumping of the rails at the joint and to hold the same rigidly in place without the use of the customary fish plates or bolts that have been found so objectionable in practice.

A further object of the invention is a rail joint that is composed of comparatively few parts capable of being expeditiously assembled, and that embodies to a marked degree the characteristics of simplicity, durability and strength.

With these and other objects in view that will more fully appear as the description proceeds, the invention consists in certain constructions and arrangements of the parts that I shall hereinafter fully describe and then point out the novel features of in the appended claims.

For a full understanding of the invention and the merits thereof and also to acquire a knowledge of the details of construction, reference is to be had to the following description and accompanying drawing, in which:

Figure 1 is a side elevation illustrating the application of my improved rail joint; Fig. 2 is a horizontal section on the line 2—2 of Fig. 1; Fig. 3 is a transverse section on the line 3—3 of Fig. 1; and, Fig. 4 is a detail perspective view showing the meeting ends of the rails in juxtaposition.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawing by the same reference characters.

Referring to the drawings, the numerals 1 and 2 designate the respective rails, the meeting ends of which preferably rest on a relatively broad support such as a plurality of cross ties 3 laid side by side, whereby to render the joint quite solid. The meeting ends of the heads 4 and base flanges 5 of the rails form butt joints, as indicated at 6 and 7, the said joints being located at

longitudinally spaced points, as shown. The base flange of the rail 1 projects longitudinally beyond the head thereof, see Fig. 4, and the web portion of this rail is extended a suitable distance beyond the base flange, as indicated at 8, and is formed with a mortise 9 leading from the extremity thereof and passing vertically therethrough. The mortise is designed for the reception of a relatively narrow tenon 10 formed at the adjacent end of the web portion of the rail 2, the extended web portion 8 lying on opposite sides of the tenon and fitting snugly between the head and base flange of the last named rail. A scarf joint is thus formed between the ends of the rails to effectually maintain the same in alinement against lateral strain.

The end wall of the mortise 9 is inclined from a point at the upper edge of the extended web portion 8 in substantially vertical alinement with the butt joint 7, and extends obliquely downwardly from the end of the rail to a point beyond the vertical line of the butt joint 6, as indicated at 11. The extremity of the tenon 10 is tapered downwardly flush with its lower edge, as shown at 12, in order to fit under the inclined end wall of the mortise (see Fig. 4). By virtue of this arrangement a double scarf joint is formed between the rail ends to insure against relative upward movement thereof.

The rails are fastened to the ties 3 through the instrumentality of spikes 13 embedded therein and taking over the base flanges 5, the spikes being driven through notches 14 formed in the edges of the base flanges, whereby to serve in addition to the above function, to hold the rails against moving apart longitudinally. As a precautionary measure to further secure the rails together, connecting bars 15 are utilized and extend longitudinally on top of the base flanges and span the joint 6 there between, the connecting bars being formed at their opposite ends with apertures 16 through which the adjacent spikes 13 are inserted. The spikes 13 which are driven on opposite sides of the rail 2 in proximity to the extremity of the extended web 8, are provided with enlarged heads 17 which bear inwardly against the portions of the extended web on opposite sides of the tenon, so as to serve to maintain said portions against possible spreading when subjected to excessive lateral strain.

When the joint is employed on a grade or at other places where the rails have a considerable tendency to pull apart, a bolt 18 is inserted through the extended web portion 8 and the tenon 10 to retain the latter in the mortise and establish a further connection between the rails. However, it is not believed that it will be necessary in the general application of the joint.

10 From the foregoing description in connection with the accompanying drawing it will be apparent that I have provided an improved rail joint which maintains the rails rigidly in alinement through the medium of 15 a peculiar double scarf joint between the ends of the rails; in which the fastening devices for securing the rails to the ties serve a dual function of holding the rails against moving apart longitudinally; and which is 20 quite simple and efficient and may be easily and cheaply manufactured.

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

1. In a rail joint, the combination of a 25 rail having its base projecting longitudinally beyond the end of the head and having its web extended beyond the end of the base, the extended web being formed with a vertical mortise leading from the extremity thereof and having an inclined 30 under-cut end wall, of a second rail having its head projecting longitudinally beyond the end of the base, the heads and bases of the rails forming butt joints at longitudinally spaced points, and a longitudinal 35 tenon formed at the end of the web of the second rail and having an inclined upper edge to fit the under-cut wall of the mortise.

2. In a rail joint, the combination of a 40 rail having its web portion extended longitudinally at one end thereof and formed with a longitudinal mortise leading from the extremity of said extended portion and

passing vertically therethrough, a second rail formed in its web portion at one end 45 with a longitudinal tenon entering the mortise, and spikes taking over the base flange of the second rail and having their heads extended inwardly and bearing against the portions of the extended web on opposite 50 sides of the tenon, whereby to maintain the portions of the extended web against spreading under lateral strain.

3. The combination of a rail formed with a longitudinal mortise leading from the end 55 thereof, a second rail provided at one end with a longitudinal tenon entering the mortise, a support for the meeting ends of the rails, the base flanges of the rails being notched in proximity to the meeting ends 60 thereof, and spikes embedded in the support and taking over the base flanges of the rails to secure the latter to the former, the spikes being driven through the notches, whereby 65 to hold the rails against separation.

4. In a rail joint, the combination of a rail formed with a longitudinal mortise 70 leading from the end thereof, a second rail provided at its end with a longitudinal tenon entering the mortise, the base flanges of the rails being notched in proximity to the meeting ends thereof, connecting bars 75 extending along the base flanges and spanning the joint and formed with openings registering with the respective notches, and fastening devices for securing the rails to the support, the fastening devices being 80 driven through the registering openings and notches, whereby to hold the rails against separation.

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

CHARLES F. WOLF. [L. s.]

Witnesses:

JULIUS STEINER,
ARCHIE HOEHN.