

No. 790,599.

PATENTED MAY 23, 1905.

P. F. SNYDER.
RAIL JOINT.

APPLICATION FILED SEPT. 27, 1904.

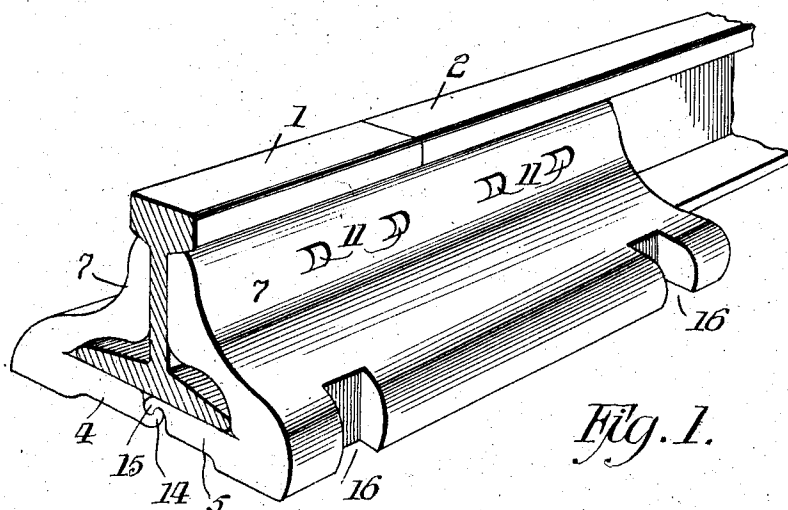


Fig. 1.

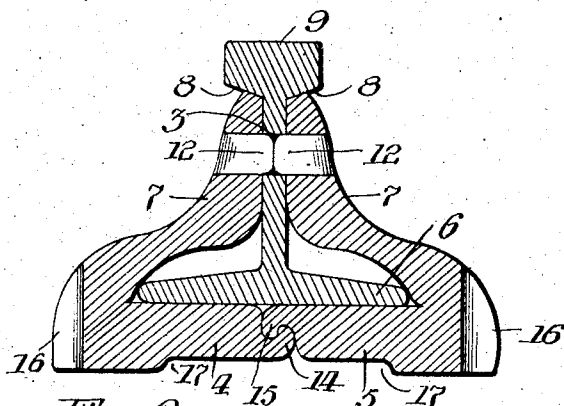


Fig. 2.

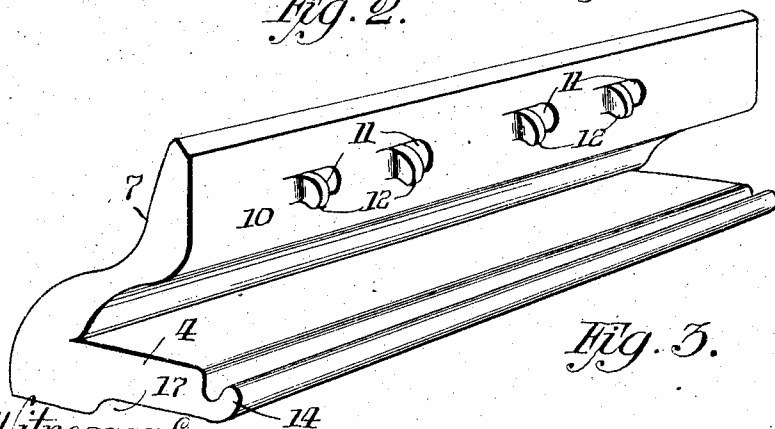


Fig. 3.

Witnesses:
K. H. Butler
E. E. Patton

Inventor
P. F. Snyder,
By S. C. Everett & Co.
Attorneys

UNITED STATES PATENT OFFICE.

PETER F. SNYDER, OF DUQUESNE, PENNSYLVANIA.

RAIL-JOINT.

SPECIFICATION forming part of Letters Patent No. 790,599, dated May 23, 1905.

Application filed September 27, 1904. Serial No. 226,129.

To all whom it may concern:

Be it known that I, PETER F. SNYDER, a citizen of the United States of America, residing at Duquesne, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Rail-Joints, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention has relation to certain new and useful improvements in rail-joints, and more particularly to the fish-plates which are employed for connecting two rails together.

The primary object of this invention is to dispense with the use of nuts and bolts and to employ novel means for securing two fish-plates together and for securing the same to the confronting ends of two rail-sections.

Another object of this invention is to provide fish-plates of a novel construction which can be readily rolled and then stamped or sheared to conform to the construction embodied in my invention. The fish-plates comprising my improved rail-joints are comparatively inexpensive to manufacture, and by using my improved plates the cost per joint is reduced to a minimum and the simple construction of my improved plates permits of the same being easily and quickly placed in position for use.

The essential features of my invention are embodied in the accompanying drawings, forming a part of this application, and while I have herein shown the preferred manner of constructing my improved rail-joint it is obvious that the same is susceptible to various changes, as will hereinafter be specifically pointed out in this application.

In the accompanying drawings like numerals of reference designate similar parts throughout the several views, in which—

Figure 1 is a perspective view of the confronting ends of two rail-sections, showing my improved fish-plates in position thereon. Fig. 2 is a vertical sectional view of the same, and Fig. 3 is a perspective view of one of the fish-plates forming a part of my improved rail-joint.

In the accompanying drawings I have illustrated my improved fish-plates as being con-

nected to the confronting ends of two rail-sections, and these rail-sections are designated by the reference-numerals 1 and 2. In the ordinary form of rail-joint commonly used the web portions of each rail adjacent to the confronting ends thereof are provided with a plurality of apertures through which the bolts commonly used have passed, and, as heretofore stated, I desire to dispense with the use of bolts; but in order to connect my improved fish-plates to the rail I retain the openings or apertures of the web portions of the rail-sections. One of these apertures is designated by the reference-numeral 3 and clearly shown in Fig. 2 of the drawings, it being understood, of course, that two of these apertures are formed in each rail-section.

The fish-plates as contemplated by me comprise base portions 4 and 5, which are adapted to lie under the base 6 of the rail, and each base portion is provided with an inwardly and upwardly extending curved plate 7 7. These curved plates are adapted to engage the under faces 8 8 of the head of the rail 9 and support the same. By referring to Figs. 1 and 2 of the drawings it will be seen that the contour of these plates is such that the inner sides 10 of each plate 7 embrace the web portions of the rail-sections 1 and 2, and to hold the rail-sections 1 and 2 in position within the plates 7 7 I stamp or punch the plates with a plurality of apertures 11, and in punching these apertures I drive or force the material from said apertures inwardly, forming lugs 12 12. These lugs are adapted to extend within the openings or apertures 3 commonly employed in connection with rail-joints, and the lugs 12 12 will prevent any longitudinal movement of the rail-sections within the fish-plates. The edges of the base portions 4 and 5 of said plates are formed with hook portions 14 and 15, the hook portion 15 being formed upon the top edge of the base portion 5, while the hook portion 14 is reversely formed—that is, upon the lower edge of the base portion 4. This construction permits of the one base portion interlocking within the other, as clearly illustrated in Figs. 1 and 2 of the drawings.

The fish-plates upon their outer edges are

provided with cut-away portions 16 16 whereby spikes may be placed in said cut-away portions to secure the fish-plates upon a tie and in engagement with the rail-section; but I wish
5 it to be understood that openings may be substituted for these cut-away portions, said openings passing down through the plates whereby when the spikes have been secured in the ties any movement of the same independently
10 of the fish-plates will be prevented. The base portions 4 and 5 of the fish-plates have recesses, as indicated at 17 17, whereby when the same are placed upon a tie a space will exist between said portions and the top of the
15 tie. This construction is employed whereby when the rolling-stock passes over the rails the connection between the base portions of each fish-plate will be securely held. The recesses 17 17 of each plate will permit of a
20 slight downward movement of the rails when the rolling-stock is passing over the same, and in this movement the connection between the two fish-plates is assured.

To remove or place in position one of my
25 improved fish-plates, it is only necessary to swing the fish-plates apart upon the pivot formed by the connections 14 and 15 of said fish-plates, the contour of said fish-plates being such as to permit of this movement.
30 When the fish-plates are in the position shown in Fig. 2 of the drawings, it will be impossible for the same to become disengaged or disjoined when the rolling-stock is passing over the same, as the downward pressure upon the
35 rails will cause the plates 7 7 to more firmly grip and embrace the web portions of said rails.

It will of course be understood that the contour of the plates comprising my improved

rail-joint may be changed to conform to different sizes and weights of rails, and it is for this reason that I do not care to limit myself to the specific construction herein described and shown.

What I claim, and desire to secure by Letters Patent, is—

1. The combination with two rail-sections, the web portions of said rail-sections having apertures formed therein, of two fish-plates, said fish-plates having pivotally-connected and
50 interlocking base portions, the sides of said fish-plates being punched to form lugs, said lugs adapted to extend within the apertures of the rail-sections, the sides of said fish-plates having cut-away portions formed therein, substantially as described.

2. The combination with two rail-sections, the web portions of said rail-sections having apertures formed therein, of fish-plates, said fish-plates having underlying base portions,
60 rounded hook-shaped edges carried by said base portions and adapted to interlock with each other and pivotally attach the fish-plates to one another, the sides of said fish-plates having openings formed therein, lugs formed
65 by punching said openings and adapted to extend within the openings of said rail-sections, the base portions of said fish-plates having recesses formed therein, the sides of said plates having cut-away portions formed therein, substantially as and for the purpose set forth.

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

PETER F. SNYDER.

Witnesses:

E. E. POTTER,
K. H. BUTLER.