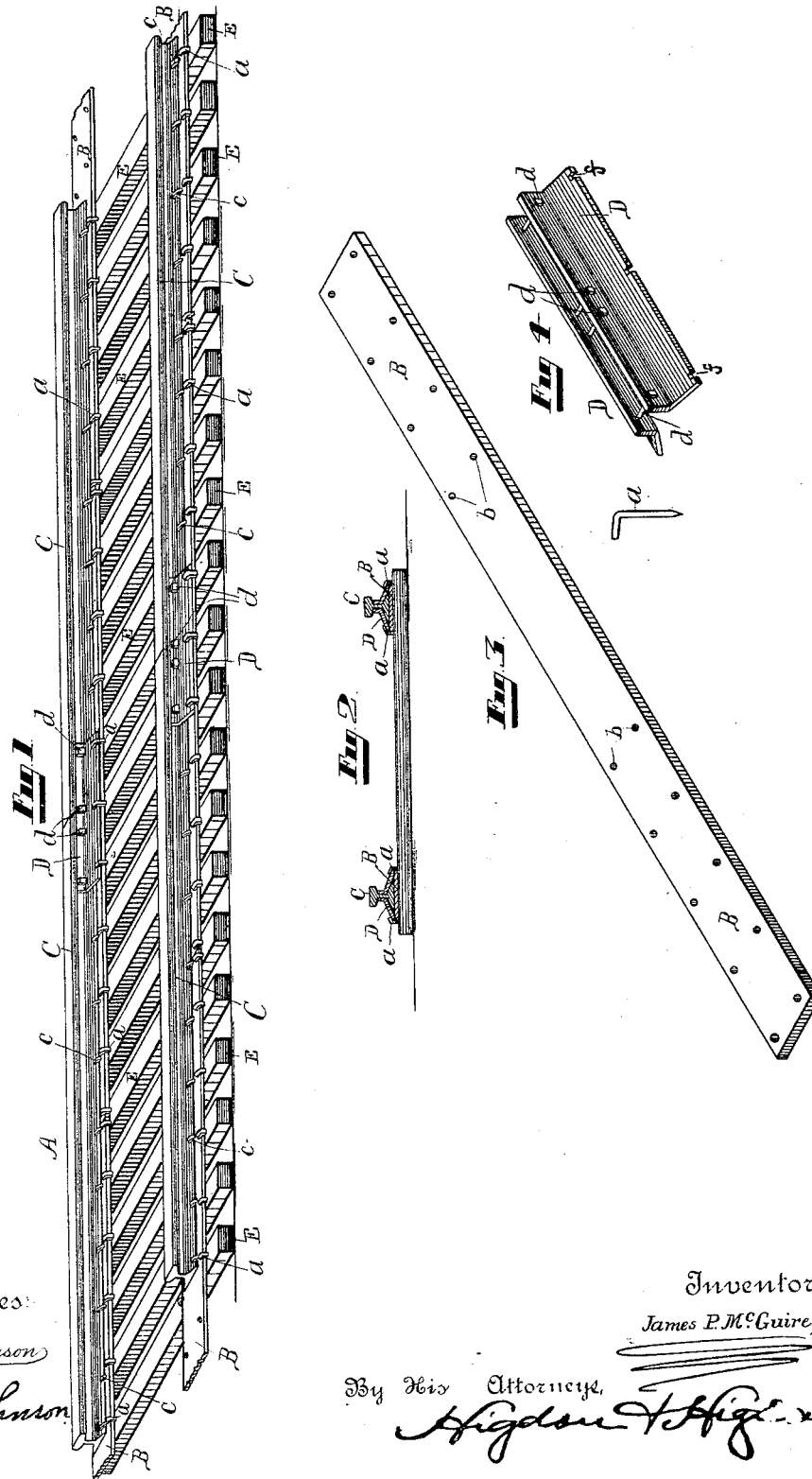


(No Model.)

J. P. McGUIRE.  
RAILWAY TRACK.

No. 419,210.

Patented Jan. 14, 1890.



Witnesses:

*R. A. Balderson*

*H. C. Johnson*

Inventor:

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By His Attorney,

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# UNITED STATES PATENT OFFICE.

JAMES P. MCGUIRE, OF ATCHISON, KANSAS.

## RAILWAY-TRACK.

SPECIFICATION forming part of Letters Patent No. 419,210, dated January 14, 1890.

Application filed October 23, 1889. Serial No. 327,918. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES P. MCGUIRE, of Atchison, Atchison county, Kansas, have invented certain new and useful Improvements in Railway-Tracks, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention relates to an improvement in the construction of railway-tracks; and it consists in the novel combination and arrangement of parts, as will be more fully hereinafter described.

In the drawings, Figure 1 is a perspective view of my invention. Fig. 2 is a sectional view thereof. Fig. 3 is a perspective view of the plate which is designed to be placed under the rails; and Fig. 4 is a similar view of the form of fish-plate which I prefer to employ, one of the spikes for securing the same to the ties being shown detached.

A represents my improved track; B, the rolled steel plate, which is made wider than the rail, of suitable thickness, and having apertures *b*, through which spikes may be driven; and C is the rail.

E E are the usual ties.

In the construction of this track the ties are first laid in the usual manner. The plate B, which is about six inches in width, three-quarters of an inch in thickness, and having the same length as the rail, is then placed upon the ties and securely spiked, the spikes being preferably of the form shown in detail in Fig. 4—that is, having their upper ends bent at right angles to form a head. The rails C are then placed on the plates. The bases of these rails being usually about four inches in width, the plates B project about one inch on each side. The rails are so laid that their ends will be located at about the center of the plates B. The rails being in position, they are spiked by means of spikes *c* passing through apertures *b* in the plate. It will be observed that at the center of the plate, where the rails meet, the apertures *b* are discontinued, thereby lessening the liability of weakening the plate at the point where strength is especially needed, the fish-plates at this point holding the rails down.

The fish-plates D, as shown in Fig. 4 in de-

tail, are formed by means of bending a plate of suitable size in such a manner that an obtuse angle is made, thus adapting the fish-plate to be bolted to the meeting ends of the rails by means of bolts *d*, the lower or horizontal portion of the plate extending over the base of the rail and the projecting portion of plate B. The edge of the fish-plate is flush with the edge of the plate B. Said lower edge of the fish-plate is notched, as at *f*, in which notches rest the spikes for securing same to the ties. By this construction it will be seen that it will be impossible for the rails to spread or for the track to work itself into kinks and get out of line, the plates proving very efficient in bracing the rails against lateral strain. Also, by thus spiking down the rails there will be an equal amount of strain on the spikes on each side of said rails. By constructing a track in this manner, laying the steel plate under the rail, it will not be necessary to make the rail as heavy as is necessary at the present time. In other words, this might be called a “double-rail track,” the steel plates forming the lower portion of the rail, while the T-shaped part constitutes the upper portion. The expansion and contraction will not be as great in this combination-rail as in the old form, the life of the track will be lengthened, and the cost will be decreased. It will also be observed that in constructing a track in this manner I attain an equal amount of strength at the point where the rails meet and at intermediate points. This is accomplished by means of my improved fish-plate. At the same time the wearing of the tie at the point where the rails are joined is decreased.

Briefly stated, the advantages are, first, the life of the track is prolonged; second, the rails will not spread or get out of line; third, uniform strength throughout.

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

The combination, with a series of ties, of the metallic plates resting thereon and provided with a series of perforations at regular intervals and on each side, of the rails arranged upon the metallic plates between the rows of perforations, spikes overlapping the

seat of the rails and passing through the perforated plate, spikes overlapping the edges of the metallic plates and securing the same to the ties, and the fish-plates at the  
5 juncture of the meeting-rails, all arranged and adapted to operate substantially as shown and described.

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

JAMES P. McGUIRE.

Witnesses:

R. A. BALDERSON,  
JNO. C. HIGDON.