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C. A. ALKINS.

DEVICE FOR PREVENTING THE SPREADING OF RAILWAY TRACK RAILS.

APPLICATION FILED NOV. 17, 1902.

NO MODEL.

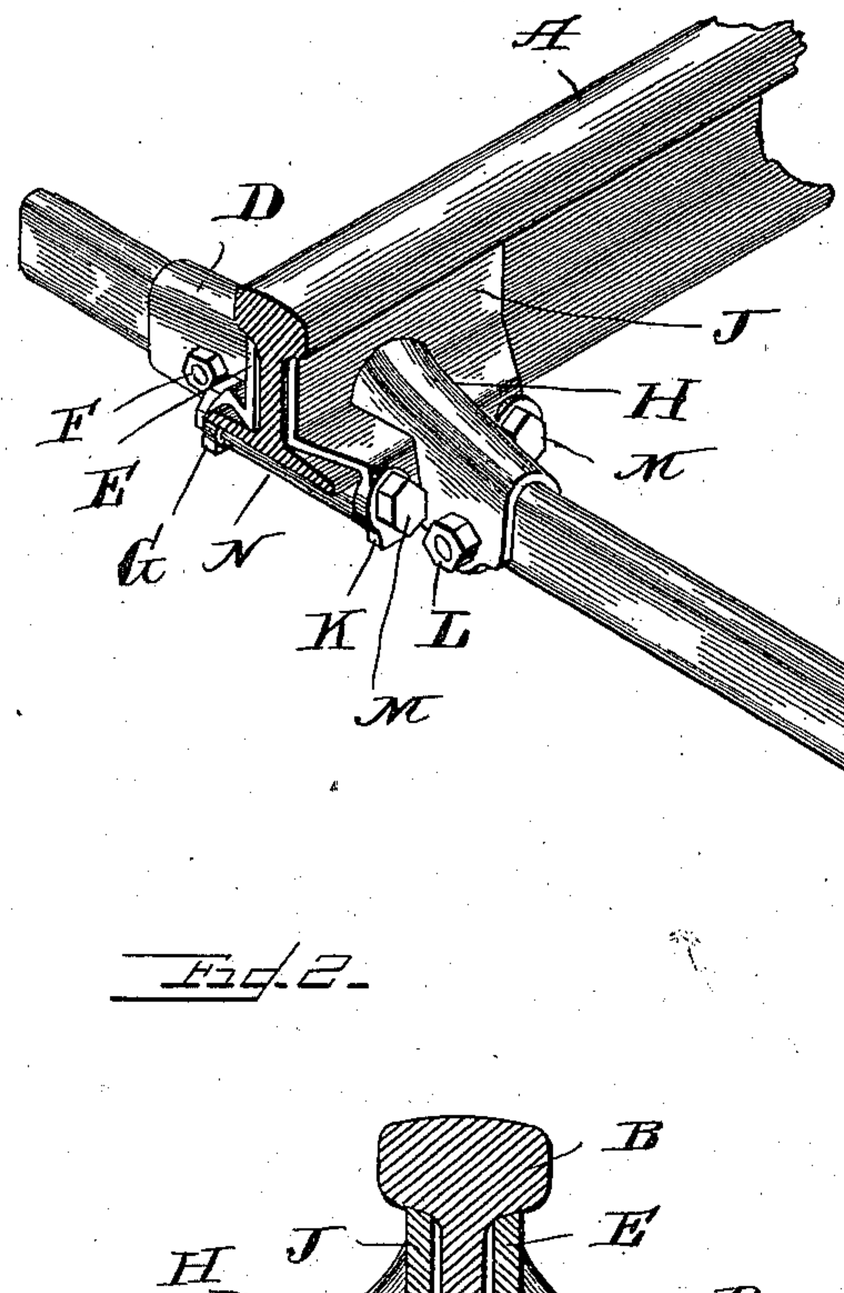

Fig. 1.

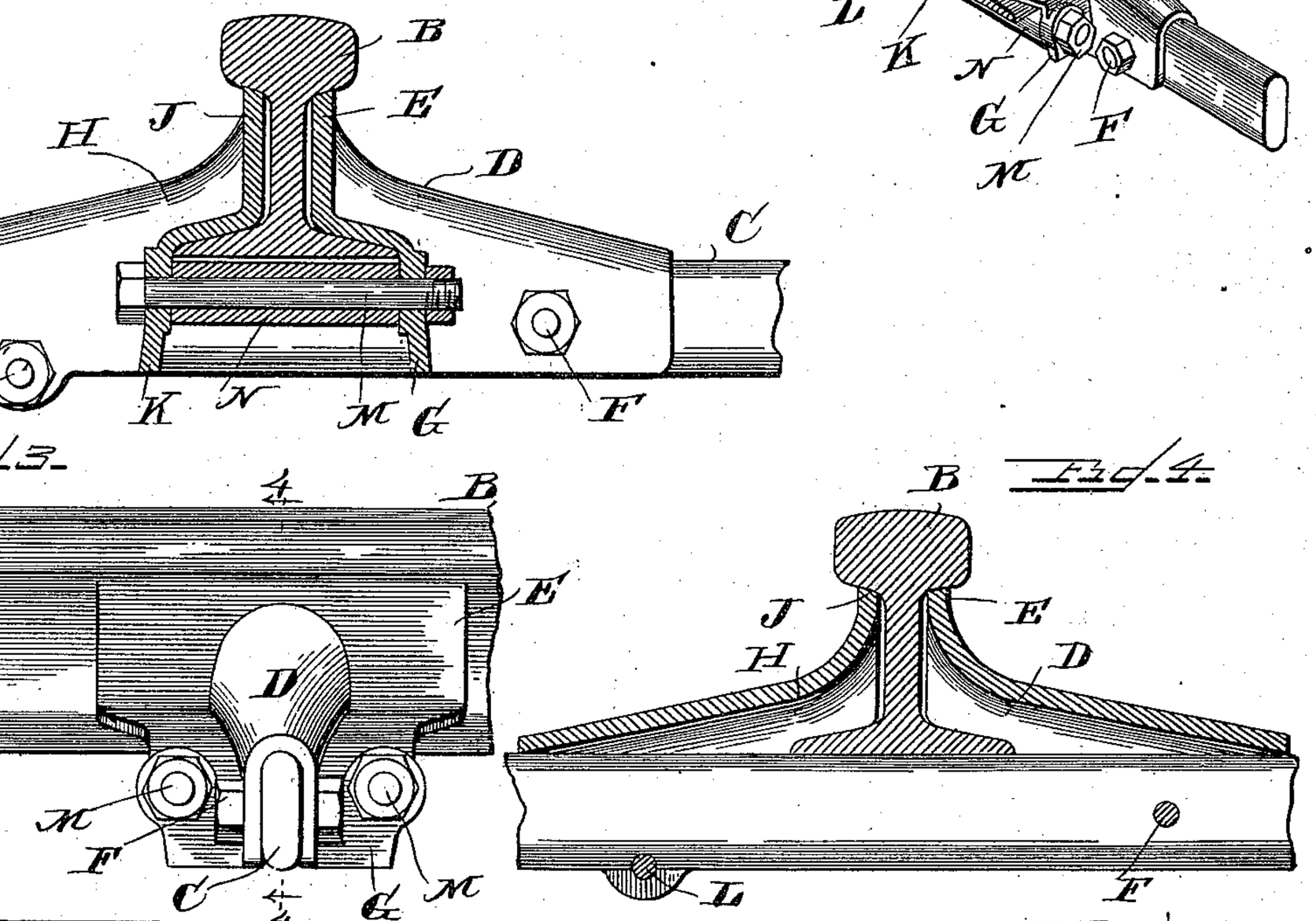

Fig. 2.

Fig. 3.

Fig. 4.

Witnesses.
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No. 728,186. Patented May 19, 1903.

UNITED STATES PATENT OFFICE.

CHARLES A. ALKINS, OF CHICAGO, ILLINOIS.

DEVICE FOR PREVENTING THE SPREADING OF RAILWAY-TRACK RAILS.

SPECIFICATION forming part of Letters Patent No. 728,186, dated May 19, 1903.

Application filed November 17, 1902. Serial No. 131,688. (No model.)

To all whom it may concern:

Be it known that I, CHARLES A. ALKINS, a citizen of the United States, residing at Hegewisch, Chicago, in the county of Cook and State of Illinois, have invented a new and useful Device for Preventing the Spreading of Railway-Track Rails, of which the following is a specification.

This invention relates to a device for preventing the spreading of railway-track rails.

The object of the invention is to provide a device which is simple in construction, economical in manufacture, and efficient in operation, whereby the spreading of railway-rails is prevented.

The invention consists, substantially, in the construction, combination, location, and arrangement of parts, all as will be more fully hereinafter set forth, as shown in the accompanying drawings, and finally pointed out in the appended claims.

Referring to the accompanying drawings, and to the various views and reference-signs appearing thereon, Figure 1 is a view in perspective of a section of railway-track, showing the application of a device for preventing the spreading of the track-rails and embodying the principles of my invention, the track-rails being in section at one end and broken off at the other. Fig. 2 is a broken detail view in section, taken transversely of a track-rail. Fig. 3 is a similar view, taken in side elevation, of a track-rail. Fig. 4 is a broken detail view in section on the line 4 4 of Fig. 3 looking in the direction of the arrows.

The same part is designated by the same reference-sign wherever it occurs throughout the several views.

Reference-signs A and B designate, respectively, the track-rails.

C designates a tie-bar arranged to extend transversely of the track-rails and underneath the latter.

D designates a casting or forging having an extended flat face E, arranged, as most clearly shown in Fig. 2, to be clamped up against the outer face of the web of the track-rails. The castings D are provided with shanks of substantially U shape in cross-section, as clearly shown in Figs. 1 and 3, arranged to straddle over the ends of tie-rods C, which extend or project beyond or to the outside of the track-rails. The castings D are securely bolted to the projecting ends of the tie-rod C by means of bolts F passing transversely through the flanges forming the U-shaped shank of casting D and through the tie-rod, as clearly shown. The castings D are also provided with depending lateral flanges G, arranged to fit over the outer edges of the bases of the track-rails, as clearly shown.

H designates coöperating castings having extended faces J, arranged to fit up against the inner faces or sides of the webs of the rails, and also with depending lateral flanges K, similar to flanges G, arranged to fit over the inner edges of the bases of the rails. The castings H are also provided with shanks U-shaped in cross-section, as most clearly shown in Fig. 1, and similar to the U-shaped shanks of castings D and also adapted to fit over or straddle the tie-rod C on the inside of the rails and suitably secured or bolted by bolts L to said tie-rod.

In order to prevent undue weakening of the tie-rod by the bolt-holes through which bolts F and L pass, one or both of said bolts may be arranged to be received in grooves or seats formed in the edge of said tie-rod. In the particular form shown, to which, however, my invention is not to be limited or restricted, I have shown the bolts F passing through holes in the tie-rod and the bolts L received in circular seats formed transversely in the under edge of said tie-rod.

From the foregoing description it will be seen that I provide a pair of castings for each rail, one of said castings being bolted to the rail on the outside thereof and the other bolted to the rail on the inside thereof, the flat faces of flanges E J of each pair of castings fitting, respectively, against the outer and inner surfaces of the web of the rail and the depending lateral flanges G K of each casting fitting over, respectively, the outer and inner edges of the base of the rail. The castings D H are securely bolted together and set up or clamped with the web of the rail between the faces E J thereof by means of bolt M passing through the depending lateral flanges G K. If desired, short tubular sections N may be strung upon the bolts M and interposed betweeen the depending lat-

eral flanges G K (see Fig. 2) in order to impart strength and rigidity to the structure. It will also be seen that each pair of castings D H is securely clamped or bolted to the tie-rod C. In this manner I secure an efficient tying together of the track-rails, thereby preventing said rails from spreading apart. It will also be seen that any tendency of the rails to rock laterally on their bases is prevented, thereby preventing the rails from being broken loose from their track-fastenings, and hence securing a most simple and efficient device for accomplishing the desired object.

In the foregoing description I have referred to the parts D H as "castings." I do not desire to be limited in the use of this term to the manner of forming these parts, as the same may be drop-forged or formed in any other convenient or suitable manner.

While a device embodying my invention is useful at any point in the line of the railroad, it has special utility at curves, where the pressure of the flanges of the wheels of passing trains exerts an increased tendency to cause the track-rails to rock or to spread apart, and many disastrous and fatal train-wrecks are caused by reason of the spreading of the rails. It is with the object of preventing such disasters that my present invention has been devised, and from the construction shown and described this object is accomplished in a most simple, efficient, and economical manner.

It will be understood that the tie-rods C are independent of the track-sleepers or ordinary track-ties, and hence my device may be readily applied at any desired point to the track-rails without disturbing in any manner the road-bed or track-ties upon which the rails rest.

Having now set forth the object and nature of my invention and a construction embodying the principles thereof, what I claim as new and useful and of my own invention, and desire to secure by Letters Patent, is—

1. In a device for preventing the spreading of track-rails, the combination with castings arranged in pairs, the members of each pair being respectively arranged on opposite sides of a rail, each casting having a flat surface or face to engage the web of the rail and a U-shaped shank, a tie-rod arranged transversely of the track-rails and received loosely in the U-shaped shanks of the members of both pairs of castings, and bolts passing transversely of said shanks and tie-rod to secure said castings to said rod, as and for the purpose set forth.

2. In a device for preventing the spreading of track-rails, the combination with a tie-rod, of a pair of castings for each track-rail, the members of each pair of castings being respectively arranged on opposite sides of a rail, and having flat sides or faces adapted to receive the web of the rail therebetween, and having depending flanges fitting over the edges of the rail-base, bolts passing through said flanges for clamping said castings toward each other, each pair of castings being independently bolted to said tie-rod, as and for the purpose set forth.

3. In a device for preventing the spreading of track-rails, the combination with a tie-rod arranged to extend underneath the track-rails and transversely thereof, a pair of castings for each rail, said castings being independently bolted to said tie-rod, the members of each pair of castings being respectively arranged on opposite sides of its track-rail, and having extended faces arranged to fit against the inner and outer surfaces, respectively, of the rail-web, each casting having depending lateral flanges fitting over the inner and outer edges, respectively, of the base of the rail, and bolts passing through the depending flanges of the members of each pair of castings whereby said members are clamped together to clamp the rail therebetween, as and for the purpose set forth.

4. In a device for preventing the spreading of track-rails, the combination with a tie-rod, of a pair of castings for each rail, each casting having a U-shaped shank to straddle and fit loosely over said tie-rod, bolts for securing said castings independently to said rod, and means for clamping the members of each pair of castings against opposite sides of the rail with which they are associated, as and for the purpose set forth.

In witness whereof I have hereunto set my hand, this 13th day of November, 1902, in the presence of the subscribing witnesses.

CHARLES A. ALKINS.

Witnesses:
E. C. SEMPLE,
S. E. DARBY.