

J. PETRI.
RAIL JOINT.
APPLICATION FILED OCT. 7, 1911.

1,014,513.

Patented Jan. 9, 1912.

2 SHEETS—SHEET 1.

FIG. 1.

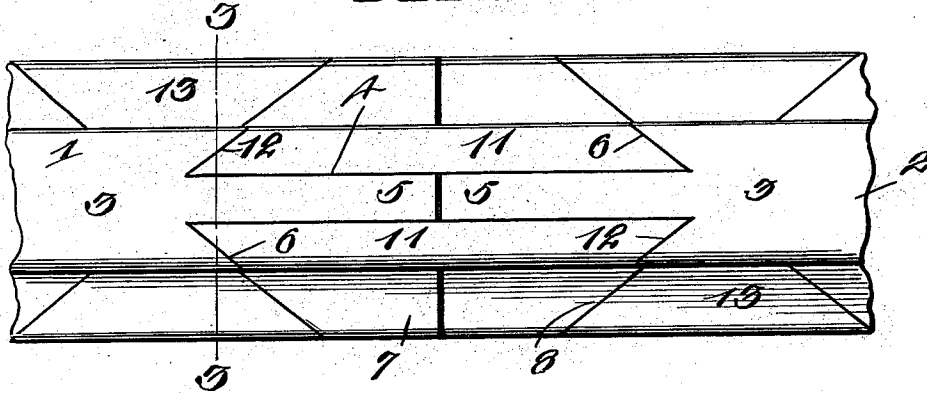


FIG. 2.

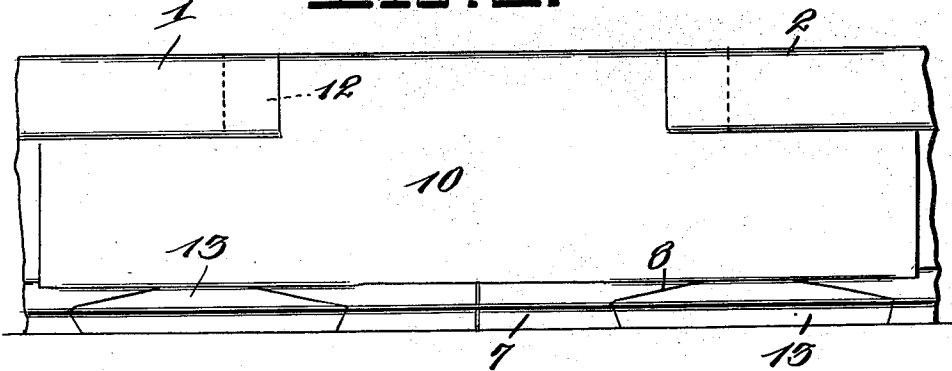
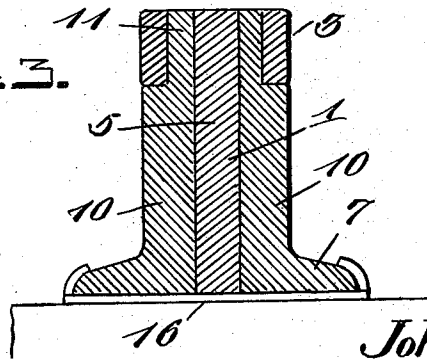


FIG. 3.



Inventor

John Petri,

Witnesses

Chas. L. Griestauer. By
L. H. Ellis.

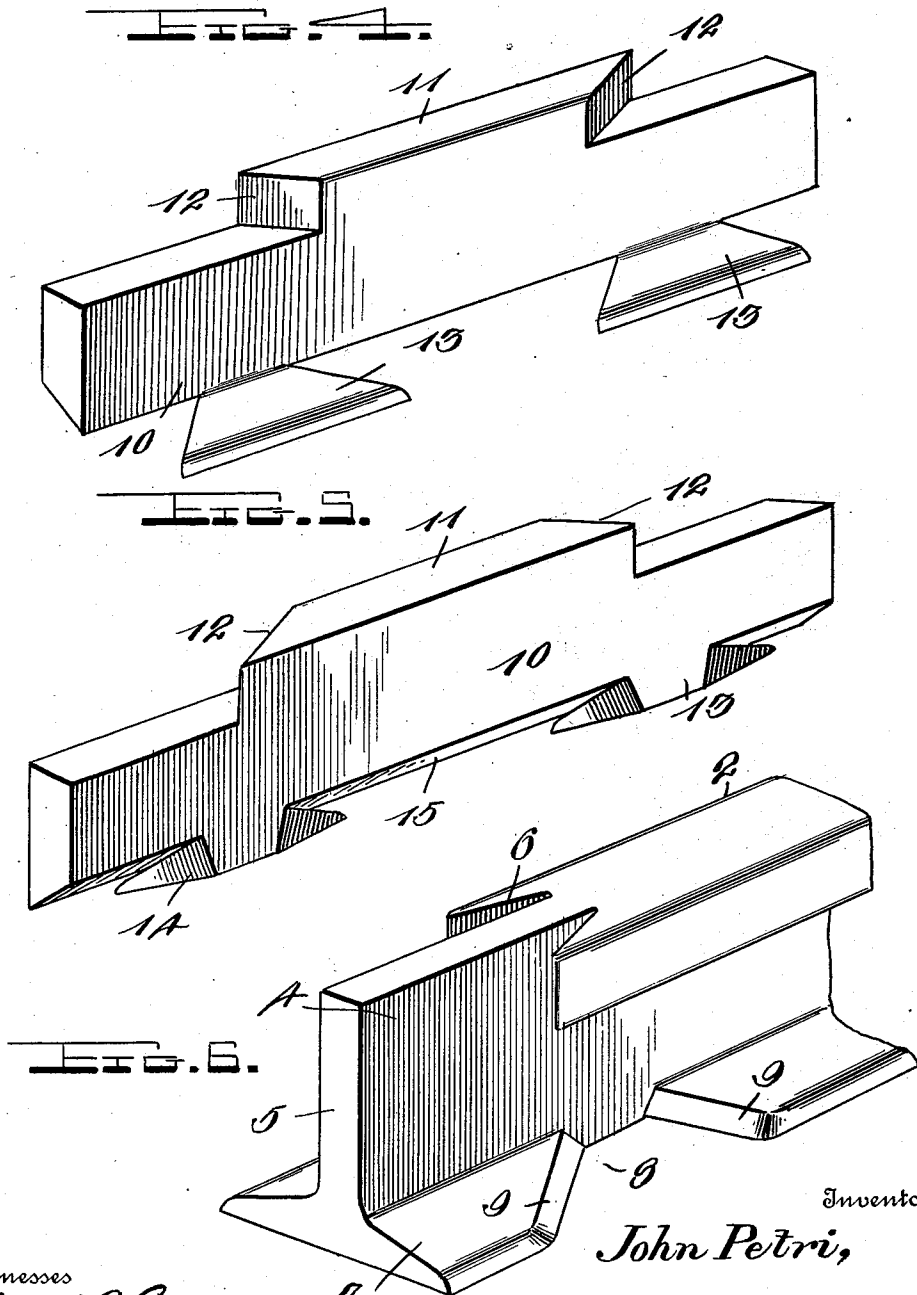
Watson E. Coleman.
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2 SHEETS—SHEET 2.



Witnesses

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UNITED STATES PATENT OFFICE.

JOHN PETRI, OF LIBERTY, MINNESOTA, ASSIGNOR OF ONE-HALF TO LEWIS A. HANSEN, OF LIBERTY, MINNESOTA.

RAIL-JOINT.

1,014,513.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JOHN PETRI, a citizen of the United States, residing at Liberty, in the county of Beltrami and State of Minnesota, have invented certain new and useful Improvements in Rail-Joints, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to new and useful improvements in rail joints and more particularly to a boltless rail joint, and my object is to provide a joint of this character which will effectively retain two alining rails in secure engagement with one another.

A further object of the invention resides in providing a joint wherein the tread portions and base flanges of the respective rails co-act with an external means in forming the joint, and a still further object resides in providing a joint which will be close fitting and noiseless throughout its use.

Still another object of the invention resides in providing the base flanges of the rails with notches which are adapted to receive portions of interlocking members, and a further object resides in providing the tread portions of the rail adjacent their abutting ends, with cut-away portions which form recesses when the rails are alined and which recesses are adapted to snugly receive portions of the interlocking means.

A still further object of the invention resides in providing a device which consists of few and simple parts, thereby readily and cheaply manufactured, one which is durable in construction, and in every way very efficient and useful in operation.

With these and other objects in view, my invention consists in the novel features of construction, combination and arrangement of parts as will be hereinafter referred to and more particularly pointed out in the specification and claims.

In the accompanying drawings forming a part of this application, Figure 1 is a top plan view of the joint. Fig. 2 is a side elevation thereof. Fig. 3 is a section as seen on line 3—3, Fig. 1, showing a chair plate applied thereto. Fig. 4 is a detail perspective view of one of the locking members. Fig. 5 is a similar view showing the oppo-

site side of said locking member, and, Fig. 6 is a detail perspective view of the end of one of the rails.

In carrying out my invention, I shall refer to the drawings in which similar reference characters designate corresponding parts throughout the several views and in which—

1 and 2 indicate the ends of a pair of rails which are adapted to be secured together in longitudinal alinement, the tread portions 3 of said rails being each cut away for a short portion of their lengths extending from the ends thereof, as shown at 4, thereby forming a substantial recess or channel between the tread portions on each side of the webs 5 when the rails are alined, and the ends of the tread portions 3 on both sides of the web 5 are beveled inwardly toward said web, as shown at 6. The base flanges 7 of the rails are provided on both sides of the web 5 thereof with the notches 8 which extend completely to the webs of said rails, as shown in Fig. 6, and the side walls of which are inclined toward one another from their outer to their inner ends. As stated, these notches are formed in the base flanges on both sides of the web 5, and the notches in each rail are disposed opposed to one another below the ends of the cut-away portions 4, and the side walls of each of said notches are beveled, as shown at 9. In order to securely lock the ends of these two rails together without the use of bolts and nuts, I provide a pair of bars or substantial fish plates 10, one of which is adapted to be disposed on each side of the web 5 of said rails at their abutting ends, and each of these bars or substantial fish plates 10 is provided with an integral extension 11 on the upper edge thereof, which extension is adapted to fit within the recess formed by the cut-away portions at the ends of the abutting rails to complete the tread portions thereof. The ends of these extensions 11 are beveled, as shown at 12, coincident to the beveled portions of the tread portions 3 of said rails, and as these extensions are substantially the exact size of the recess formed between the opposed tread portions of said rails, it will be seen that said extensions are adapted to fit snugly therein. These projections 11 on

the plates 10 will, of course, complete the tread portions of the rails to form a perfect surface over which the wheels of a truck may pass, but in order to retain the plates in this position, each of said plates is provided on its lower edge with a pair of lateral projections 13 which are designed to fit snugly within the notches 8 of the opposed rails, one of the projections fitting in the notch of one of the rails, while the other projection fits in the notch of the opposed rail. Being designed to fit snugly, as stated, within the notches 8 of the rails, said projections have the side edges thereof inclined toward one another and beveled, as shown at 14, coincident with the beveling 9 of the side walls of said notches, and said projections are also tapered in thickness toward their outer ends coincident with the tapering of the base flanges 7 of said rails, so that when properly positioned within the notches, these projections will complete the base flanges and will also lock the opposed rails together. The plates 10 extend the full height of the webs 5 of said rails between the tread portions and base flanges thereof, so that in order to provide a neat appearing and perfect fitting plate, the lower edges of said plates are also beveled, as shown at 15, coincident with the inclination of the base flanges of the rails upon which the same are adapted to rest.

In applying the plates 10 to use, the same are brought into position from beneath the tread portions 3 of the rails so that the projections 11 will enter the recesses formed between the abutting rails simultaneously with the entering of the projections 13 within the notches 8 of the base flanges thereof, and when once positioned, it will be seen that the rails cannot be separated through either longitudinal or lateral movement. It may be possible that the tie upon which the rails rest and upon which the joint is to be formed, is warped or decayed so that the rails are not adapted to rest perfectly thereon, and when such conditions are encountered, a chair plate 16 is provided, as shown in Fig. 3, and in this connection, it may be stated that if no other means is provided for securing the rails to the tie, this chair plate may always be used for that purpose.

Although I have shown a plate which is to be used with a single line of rails, thereby necessitating a pair of the same on the tie to properly seat both rails thereon, it will be understood that a single plate may be provided which will extend substantially the full width of the tie. In this connection, it must be stated that while I have particularly described the features of the preferred form of my invention, it will be readily understood that various changes in form, proportion and in the minor details

of construction may be resorted to without departing from the spirit or sacrificing any of the principles of the invention.

From the foregoing, it will be seen that I have provided an improved boltless rail joint containing few and simple parts, which may be readily and cheaply manufactured, is durable in construction, and extremely efficient and useful in operation.

What I claim is:—

1. In a rail joint of the class described, the combination with a pair of longitudinally alined members, the upper portions of said members having portions cut therefrom to form recesses therebetween, and the base portions of said members being also provided with notches; of a pair of locking members applied to the sides of said other members, said locking members being provided with extensions fitting within the recesses formed between the upper portions of said alined members and also provided with projections fitting within the notches of the aforesaid members.

2. In a rail joint of the class described, the combination with a pair of longitudinally alined rails, the tread portions of which are cut away at their abutting ends to form recesses therebetween and said rails also having the base flanges thereof provided with notches; of a pair of plates applied to the sides of said rails at their abutting ends, said plates being provided with extensions on the upper edges thereof snugly fitting within the recesses formed between the tread portions of the rails, and projections formed on the lower edges of said plates fitting within the notches formed in the base flanges of said rails.

3. In a rail joint, the combination with a pair of longitudinally alined and abutting rails, the tread portions of each of which are cut away on opposite sides of the web at the abutting end thereof to form recesses between the tread portions of said rails, said rails also having the base flanges thereof provided with notches; of a pair of plates applied to opposite sides of the webs of said rails, said plates being provided with extensions on their upper edges snugly fitting within the recesses formed between the tread portions of said rails, and a pair of projections formed on the lower edge of each of said plates and fitting within the notches in the base flanges of the opposed rails.

4. In a rail joint of the class described, the combination with a pair of longitudinally alined and abutting rails, the tread portions of which are cut away at the abutting ends thereof to form recesses between the rails, the ends of the tread portions being beveled inwardly, and the base flanges of said rails provided with notches, the side walls of which are also beveled; of a pair of plates applied to the webs of said rails,

said plates being provided with extensions on their upper edges fitting within the recesses formed between the tread portions of the opposed rails, the end walls of the projections being beveled coincident to the beveling of the ends of the tread portions, and projections formed on the lower edges of said plates fitting within the notches formed in the base flanges of the rails, said projections having the side edges thereof also beveled coincident with the beveling of the side walls of the notches.

5. In a rail joint of the class described, the combination with a pair of opposed rails arranged in longitudinal alinement, the tread portions of which are cut away at the abutting ends thereof to form recesses between the same on opposite sides of the web, the ends of the remaining tread portions being beveled inwardly, and the base flanges of said rails provided with notches, the side

walls of which are also beveled; of a pair of plates applied to the webs of said rails at their meeting ends, said plates being each provided with a longitudinal extension on the upper edge thereof, which extension is adapted to fit in the recess on one side of the web and has the end edges thereof beveled coincident to the beveling of the ends of the tread portions of the rails, and a pair of projections formed on the lower edge of each of said plates, said projections being adapted to fit within the notches in the base flanges of the rails, said projections having their side edges beveled coincident to the beveling of the walls of said notches.

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

Witnesses:

A. E. DICKINSON,
R. H. DICKINSON.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."