C. F. COURSON.

DEVICE FOR SECURING RAILROAD RAILS TO TIES.

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1,039,032. Patented Sept. 17, 1912.

Fig. 1.

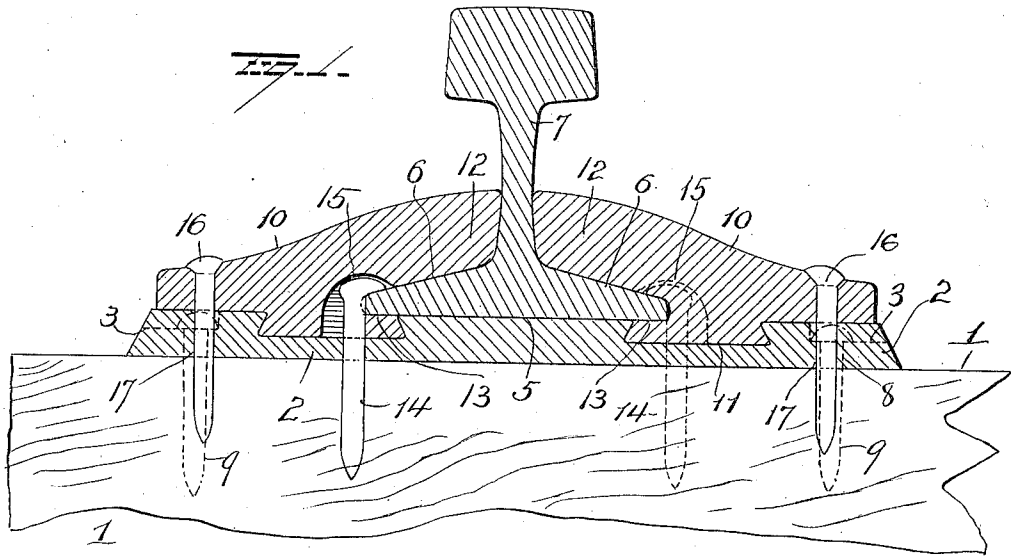

Fig. 2.

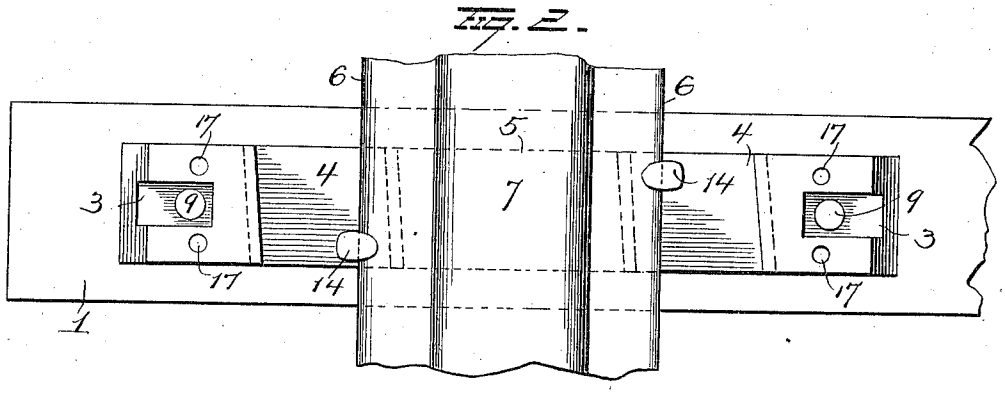

Fig. 4.

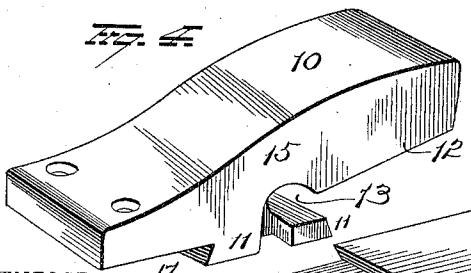

Fig. 3.

WITNESSES

E. D. Whittington

G. F. Downing.

INVENTOR

C. F. Courson

By H. A. Seymour

Attorney

UNITED STATES PATENT OFFICE.

CORNELIUS F. COURSON, OF MEMPHIS, TENNESSEE, ASSIGNOR OF ONE-HALF TO PAUL LENZI, OF MEMPHIS, TENNESSEE.

DEVICE FOR SECURING RAILROAD-RAILS TO TIES.

1,039,032. Specification of Letters Patent. Patented Sept. 17, 1912.

Application filed April 20, 1912. Serial No. 692,014.

To all whom it may concern:

Be it known that I, CORNELIUS F. COURSON, a citizen of the United States, residing at Memphis, in the county of Shelby and State of Tennessee, have invented certain new and useful Improvements in Devices for Securing Railroad-Rails to Ties; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to an improvement in devices for securing rail road rails to ties, and it consists in the parts and combination of parts as will be more fully described and pointed out in the claims.

In the accompanying drawings, Figure 1 is a view in section of the rail, chair and clamping blocks; Fig. 2 is a view in plan showing the chair and rail, the clamping blocks being removed; Fig. 3 is a view in perspective of the chair and Fig. 4 is a similar view of one of the clamping blocks.

1 represents a wood tie, and 2 a chair, the latter preferably made by drop forging. There are two chairs to a tie, one under each rail, and each is provided with a recess 3 in its top surface at each end, and with two dovetailed recesses 4, in its upper face, one adjacent each end. The portion 5 of the chair intermediate the recesses 4, forms the seat or support for the rail, but is of slightly less width than the base flange 6 of the rail 7, so that the latter overhangs the dovetailed recesses 4 at both sides of the rail. The chair is provided within the recessed portions 3, with spike holes 8, through which spikes 9 are driven to secure the chair 2 to the tie 1, the recesses 3 forming housings for the heads of the spikes 9, which, when the parts are assembled, are covered and concealed by the clamping blocks 10.

Each clamping block 10, is provided with a dovetail tenon 11 projecting from its lower face, and each tenon is of a size and shape to make a close fit with one of the dovetailed recesses or mortises 4 in the chair 2. The two clamping blocks 10 for each chair rest on the upper face of the latter so as to cover and conceal the spikes 9, and prevent them working loose, and each block is provided with a jaw 12 conforming in shape to and resting on the upper surface of the base flange 6 of the rail, and each is also provided with a groove 13 to receive the edge of said base flange, so that when the rail is in place, the clamping blocks 10 will engage both the upper and lower faces of the base flange. The grooves 13 are immediately over the inner edges of the dovetailed tenons 11, so that the base flange of the rail rests on, and over the joint between its seat 5 and the dovetailed tenons 11, and operates by its weight to hold these parts down in proper position.

The rail is secured to the tie by spikes 14 passing down through holes formed in the chair adjacent the edges of the mortises, and the two clamping plates 10 are recessed at their sides, as at 15, to receive and cover the heads of the spikes 14 and lock them against the possibility of partial or complete withdrawal. The dovetail mortises 4, and the tenons 11, are slightly oblique with relation to the long axis of the rail, so that in assembling the parts, the clamping blocks 10 will be moved slightly toward the rails or toward each other, and bind against the upper faces of the base flange with a wedging action.

The spikes 14 securing the rails to the tie are located one at each side of the rail, and near the side edges of the chair 2 as shown, so as to permit the tenons 11 on the clamping blocks to be driven into place from the opposite sides, and when in place the spikes will be within the recesses 15 in the blocks and be covered and concealed from above by the latter. After the blocks have been driven home, they are secured in place by spikes 16 driven into the ties through holes in the ends of the blocks and through holes 17 formed in the chair.

From the foregoing it will be seen that the rails are seated on metal chairs, and are spiked to the ties in the ordinary manner, and in addition are further secured in place by the clamping blocks connected by dovetail connection with the chair, and as the spikes for the rails and the spikes for the chair are locked in place by the clamping block, all chance for any displacement of the rail is positively eliminated.

It is evident that many slight changes might be resorted to in the relative arrangement of parts shown and described without departing from the spirit and scope of my invention. Hence I would have it understood that I do not wish to confine myself to the exact construction and arrangement of parts shown and described, but

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

1. In a rail fastener, the combination of a chair adapted to be spiked to a tie and having dovetailed mortises in its upper face and a rail seat intermediate the mortises, and clamping blocks each having a dovetailed tenon adapted to engage a mortise in the chair, and a jaw to overlap the base flange of the rail, the said clamping blocks also locking the chair securing spikes against withdrawal.

2. In a rail fastener, the combination of a chair having dovetailed mortises in its upper face and a rail seat intermediate said mortises, and clamping blocks each having a dovetailed tenon adapted to engage a mortise in the chair, and a jaw to overlap the base flange of the rail, the said jaw being recessed at one edge to receive and house the head of a spike engaging the base flange of the rail and passing through the chair.

3. In a rail fastener, the combination of a chair having dovetailed mortises in its upper face and a rail seat intermediate said mortises, clamping blocks resting on said chair at opposite sides of the rail, each block having a dovetailed tenon resting within a mortise in the chair, and a jaw overlapping the base flange of the rail, spikes for securing the rail, and spikes for securing the chair to the tie, the said spikes for the rail and chair being locked against displacement by the clamping blocks.

4. In a rail fastener, the combination of a chair having dovetailed mortises, and a rail seat intermediate said mortises, a rail resting on said seat, spikes engaging the base flange of the rail and passing through the chair and into the tie, clamping blocks having dovetailed tenons resting in said mortises, and jaws overhanging and engaging the base flange of the rail, the said jaws being recessed to receive the heads of the rail securing spikes, and spikes passing through the clamping blocks, and chair and into the tie.

In testimony whereof, I have signed this specification in the presence of two subscribing witnesses.

CORNELIUS F. COURSON.

Witnesses:
F. H. Burr,
P. Lenzi.