

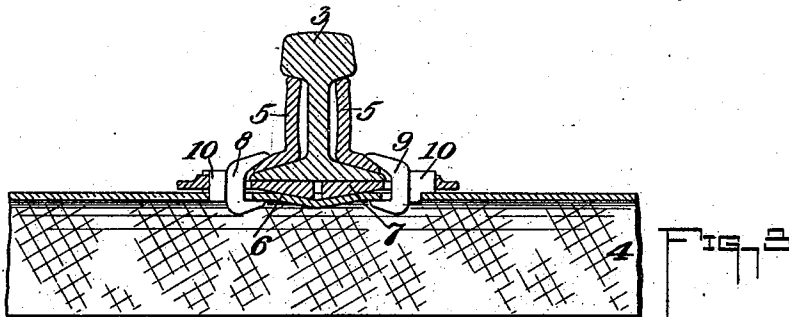
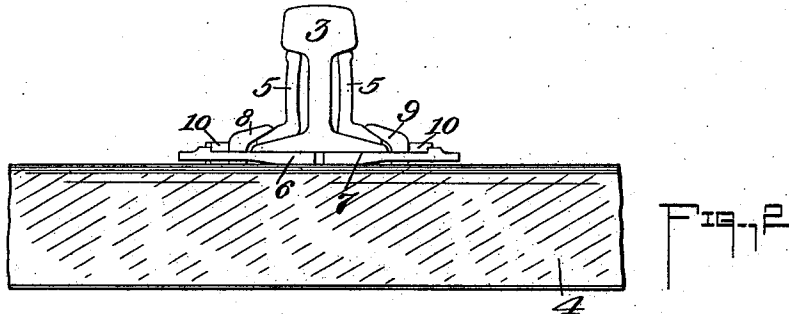
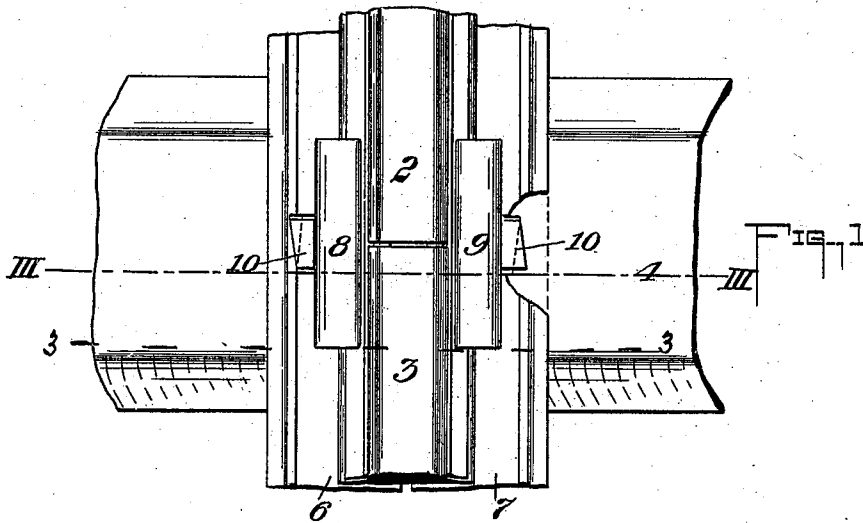
(No Model.)

2 Sheets—Sheet 1.

J. L. POPE.  
RAIL SECURING DEVICE.

No. 502,830.

Patented Aug. 8, 1893.



WITNESSES =

Thomas W. Blandell  
James Mughan

INVENTOR =

J. L. Pope

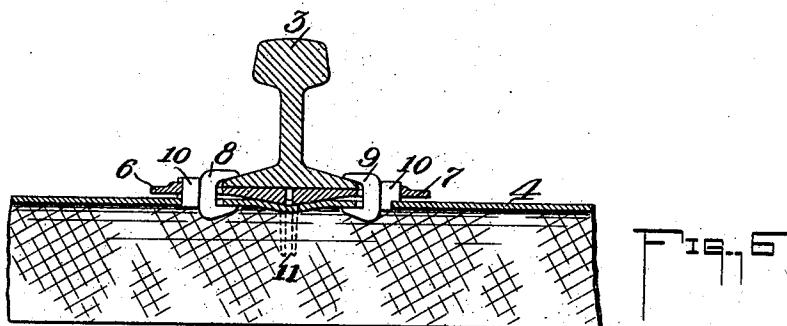
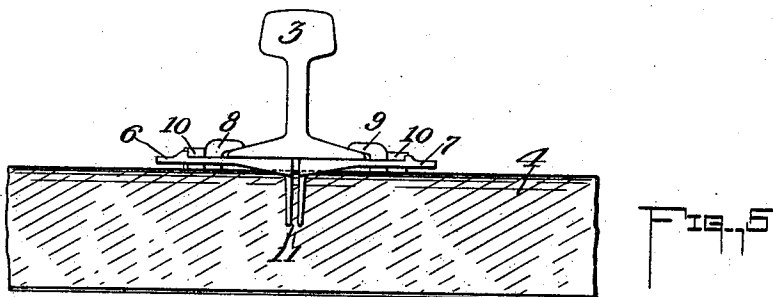
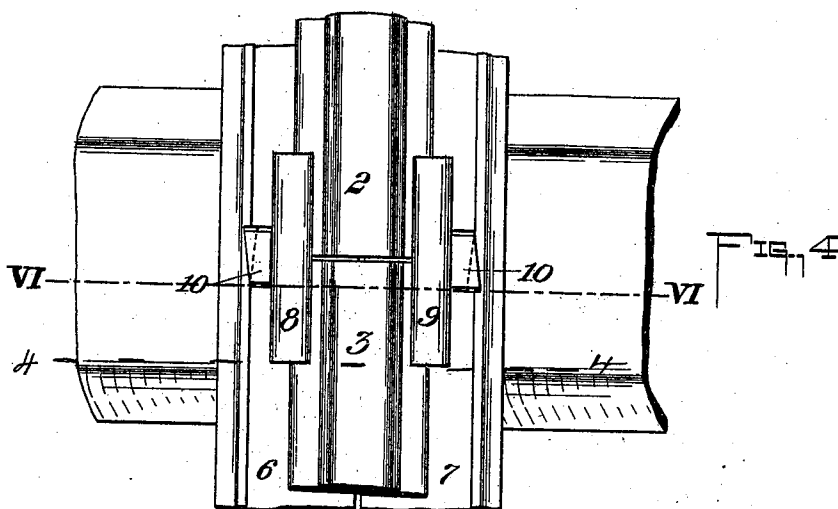
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2 Sheets—Sheet 2.

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RAIL SECURING DEVICE.

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WITNESSES—

Thomas W. Baxwell  
James Meighan

INVENTOR—

John L. Pope

# UNITED STATES PATENT OFFICE.

JOHN L. POPE, OF CLEVELAND, OHIO.

## RAIL-SECURING DEVICE.

SPECIFICATION forming part of Letters Patent No. 502,830, dated August 8, 1893.

Application filed November 1, 1892. Serial No. 450,640. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN L. POPE, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented a new and useful Improvement in Rail-Securing Devices, of which the following is a full, clear, and exact description.

My invention relates to improved means for fastening railway rails to their ties or other supporting devices and for holding the rails together at the joints.

In the drawings, Figure 1 is a plan view of a rail-joint provided with my improvement. Fig. 2 is an end view of the rail and the parts of the securing device. Fig. 3 is a vertical cross-section on the line III—III of Fig. 1. Fig. 4 is a plan view of a modified construction. Fig. 5 is an end view of the parts of Fig. 4; and Fig. 6 is a vertical cross-section on the line VI—VI of Fig. 4.

Like symbols of reference indicate like parts in each figure.

In Figs. 1, 2 and 3, 2, 3, are rails intended to be held together at the joint.

4 is a railway tie, and 5, 5, are usual fish-plates.

6, 7, are plates on which the rail sets and which have beveled under faces resting upon correspondingly beveled surfaces upon the tie, the parts being so constructed relatively to each other that when the rail bears upon the top of said plates, its weight and down-pressure of passing trains upon it tend to draw the plates toward the middle line of the rail.

8, 9, are clips or hooks which pass through registering slots formed in said plates and in the surface of the tie. The outer sides of these slots are oblique so that the slots in the plate (6 or 7) and the registering slot in the tie shall taper in respectively opposite directions, and in each pair of said slots is set a double wedge 10, of which the part fitting in the slot of the plate tapers in one direction to conform to the taper of said slot, and the part fitting in the slot of the tie tapers in the opposite direction. As the plates 6, 7, are urged inwardly by down pressure of the rail upon them, the outer sides of their slots bear against the outer sides of the wedges, and by reason of their inclination push the same lengthwise toward the wider end of the slots in the plates. But this motion presses the lower parts of the

wedges toward the narrower parts of the slots in the tie, and thus causes the wedges to fill the space between the outer edges of the slot in the tie and the backs of the clips and thus to lock the clips, (the ends of which bear upon the flanges of the fish-plates or rails and on the under side of the tie,) and thus causes the clips to bind the rail securely to the tie and the fish-plates to the rail with a force proportionate to the degree of pressure exerted upon the rails. The plates 6, 7, are preferably long enough to extend along the rails for a considerable distance, sufficient to span several ties, and at each of said ties there is a set of securing devices illustrated in the drawings.

I have designed the construction shown in the figures on the second sheet of the drawings, primarily with a view of affording means by which the joints may be secured without the use of fish-plates. For this purpose, the inner edges of the plates 6, 7, are formed with flanges 11, which project downwardly therefrom between the ties and add to the joint the strength and support usually afforded by the fish-plates. The joints of the rails may be located on the ties, as shown, or between the ties.

The advantages of the invention will be understood by those skilled in the art.

The device is simple, strong, easily applied, and occasions economy in the first construction and maintenance of the railway.

I claim—

1. The combination of a railway rail and tie or other rail-support, a clip or hook, a wedge which acts lengthwise of the rail, and automatic means adapted to actuate the wedge lengthwise of the rail by down pressure upon the rail, to press the clip or hook against the rail; substantially as described.

2. The combination with a railway rail and tie or other rail support, of a clip or hook connecting these parts, a beveled plate adapted to be moved transversely by downward pressure of the rail, and a wedge actuated by motion of the plate to bind the clip; substantially as and for the purposes described.

3. The combination with a railway rail and tie or other rail support, of a clip or hook connecting these parts, a wedge, and means operatively connecting the wedge and rail and causing downward pressure of the latter to

actuate the wedge; substantially as and for the purposes described.

4. The combination with a railway rail and tie or other rail support, of a clip or hook connecting these parts, a beveled plate adapted to be moved transversely by downward pressure of the rail, and a wedge set in oppositely tapering slots in plate and tie and movable longitudinally by transverse pressure of the plate; substantially as and for the purposes described.

5. The combination with a railway rail and tie or other rail support, of clips or hooks connecting these parts, oppositely beveled plates on which the rail sets, which plates are adapted to be moved inwardly by downward pressure thereon, and wedges actuated by motion of the plates to bind the clips; substantially as and for the purposes described.

6. The combination of a rail joint having fish-plates, a tie or other support, a clip or hook bearing on a fish-plate to clamp it to the rail and tie, and a wedge movable in the direction of the length of the rail and bearing on the clip or hook to hold the same in position; substantially as and for the purposes described.

7. The combination of a rail joint having

fish-plates, a tie, or other support, a clip or hook bearing on a fish-plate to clamp it to the rail and tie, a beveled plate adapted to be moved transversely by downward pressure of the rail, and a double wedge bearing against oppositely inclined surfaces on the plate and tie, and adapted to be actuated by the plate to hold the clip; substantially as and for the purposes described.

8. The combination of a railway tie or other rail-support, having oppositely beveled faces, and beveled plates bearing thereon, and having downwardly-projecting flanges between the ties; substantially as and for the purposes described.

9. In a rail-joint, the combination of fish-plates, a tie or other rail-support, a clip or hook bearing on the fish-plate to clamp it to the rail and tie, and a beveled plate adapted to be moved transversely by downward pressure of the rail to hold the clips in place; substantially as and for the purposes described.

In testimony whereof I have hereunto set my hand this 27th day of October, A. D. 1892.

JOHN L. POPE.

Witnesses:

C. W. POPE,

W. B. WHITING.