J. M. COOPER.

RAIL JOINT.

APPLICATION FILED FEB. 21, 1912.

1,037,595. Patented Sept. 3, 1912.

Fig. 1.

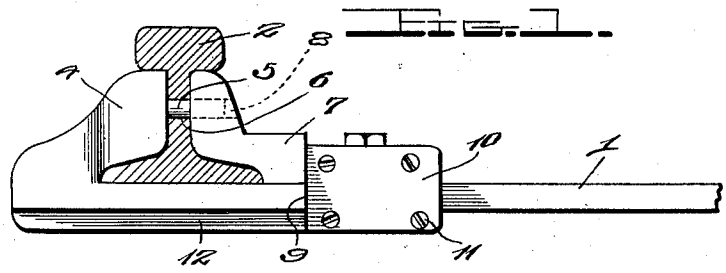


Fig. 2.

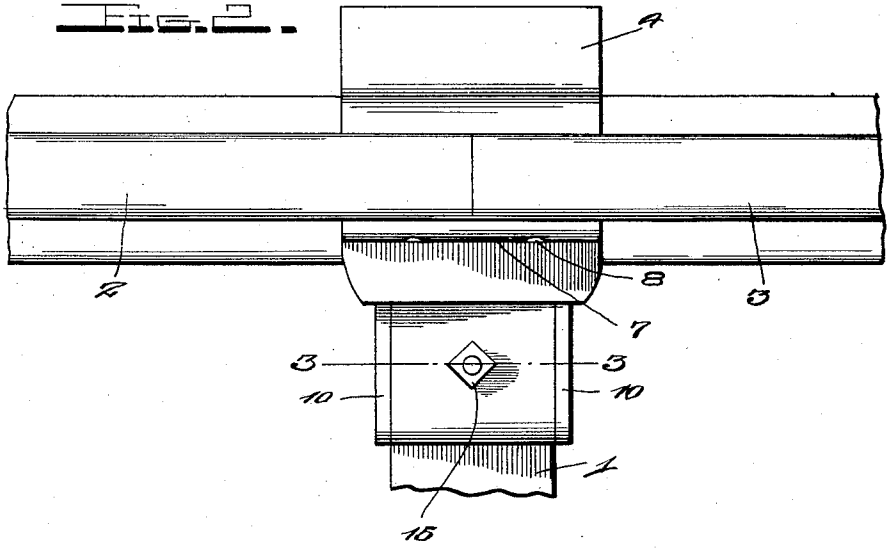
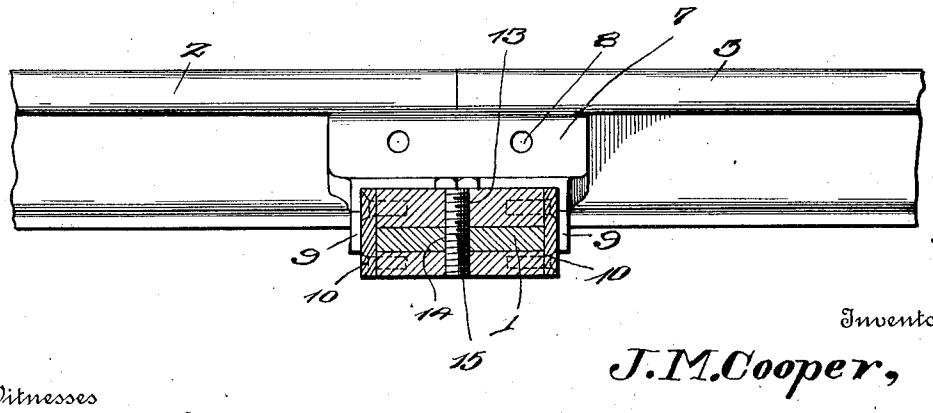


Fig. 3.



Witnesses

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RAIL-JOINT.

1,037,595. Specification of Letters Patent. Patented Sept. 3, 1912.

Application filed February 21, 1912. Serial No. 679,076.

To all whom it may concern:

Be it known that I, JOHN M. COOPER, a citizen of the United States, residing at Lewiston, in the county of Kanawha and State of West Virginia, have invented certain new and useful Improvements in Rail-Joints, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to new and useful improvements in rail joints and more particularly to the class known as joint chairs, and my object is to provide a device of this character which is simple and durable in construction and one which will be thoroughly effective in carrying out the purpose for which the same is designed.

A further object of the invention resides in providing a device which may not alone be used for the purpose of securing a pair of rails together, but will also form a tie therefor.

Still another object of the invention resides in providing a base plate which is adapted to perform the functions of a tie having rail sustaining plates at the ends thereof and also provided with additional rail sustaining plates removably mounted on the same to coöperate with the first mentioned sustaining plates.

With these and other objects in view, the 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 drawing forming a part of this application, Figure 1 is a front elevation of the device partly in section; Fig. 2 is a top plan view thereof; and Fig. 3 is a fragmentary vertical section through the device, as seen on the line 3—3, Fig. 2.

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

1 indicates an elongated base plate adapted to form a tie for a pair of opposed rails 2 and 3 resting thereon and formed integral with the one end of said plate is the inwardly disposed rail sustaining or clamping block 4, said block being so formed as to engage the base flanges and the webs of the aforesaid opposed rails. The face of the block 4 which is adapted to engage the webs of said rails 2 and 3 is provided with a pair of spaced pins or studs 5, which are adapted to extend through apertures 6 formed in the webs of said rails adjacent their abutting ends and in order to clamp said abutting rails in position, I provide an additional clamping or sustaining block 7. This sustaining or clamping block 7 has the effective face thereof designed similar to the effective face of the sustaining member 4 so as to engage the opposite faces of the webs and base flanges of said opposed rails, the portion of said member 7 which is adapted to engage the webs of said rails being provided with a pair of channels or openings 8 to receive therethrough the projected ends of the studs or pins 5. This rail sustaining block 7 is slidably arranged on the base member 1, the same having a body portion resting flatly thereon and the base plate or tie 1 is reduced in width for a greater portion of its length to form the shoulders 9 on the side edges thereof adjacent the ends of the same. This member 7, as stated, is movably arranged on the plate and in order to retain the same in position thereon, the side faces of the body of the same which are arranged substantially flush with the side edges of the base plate 1, have removably secured thereto, the upper ends of the side plates 10. These plates are removably secured to the side faces of the member 7 by means of the screws or the like 11 and the lower ends of said plates are similarly engaged with the side edges of the underlying plate 12 whereby it will be appreciated that the member 7 will be slidably retained on the plate or tie 1.

The inner faces of the side plates 10 will, of course, contact with the side edges of the reduced portion of the plate 1 and at one edge said plates are adapted to contact with the shoulders 9 on the plate 1, when said member 7 is moved toward the member 4, thereby limiting the movement of said member 7. In such a position, the opposed faces of the members 4 and 7 will be spaced sufficiently to permit rail webs of a standard thickness to tightly fit therebetween and an opening 13 in the body of the member 7 will at the same time aline with a similar opening 14 in the base plate 1. These alining openings may be threaded, as shown, or

otherwise, and a screw or the like 15 is adapted to be engaged with these alined openings to secure the member 7 in effective position.

In practice, it will be seen that the opposed rails are brought to abut on the plate 1 and are then moved into engagement with the rail sustaining block or clamping member 4, so that the pins 5 thereof extend through the openings in the webs of said opposed rail. The member 7 is then moved along the member 1 until the effective face thereof contacts with the webs and base flanges of said rails and at this point, the projecting pins 5 will extend through the channels or openings 8 and the opening 13 in said member 7 will aline with the opening 14 in the base member 1. The screw 15 is then effectively positioned and the opposed rails will be securely held together and the plate 1 will form a substantial tie therefor. In this connection it will be seen that the underlying plate 12 of the movable member 7 will contact with the surface of the ground below the rails, thereby spacing the member 1 on the ground sufficiently to prevent undue sinking of the plate 1 into the ground under pressure of the object moving over the rails.

From the foregoing, it will be seen that I have provided a simple, inexpensive and efficient means for carrying out the objects of the invention and while I have particularly described the elements best adapted to perform the functions set forth, it is obvious 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.

Having thus described my invention, what I claim is:—

1. In a rail joint, a rail supporting chair having a sustaining block formed integral with one end thereof, an additional sustaining block, a plate underlying said chair, removable securing plates connecting said underlying plate and the additional sustaining block, said plates retaining said additional block, in sliding engagement with the upper face of the chair, and means to lock said additional sustaining block in its effective position on the chair.

2. In a rail joint, an elongated plate having a sustaining block formed integral with one end thereof, said plate being reduced in width adjacent the sustaining block to provide shoulders on the side edges of the plate, an additional sustaining block, a plate underlying the aforesaid plate and of a width substantially equal to the reduced width of the latter, side plates adapted to connect the additional sustaining block and said underlying plate, means to removably secure said side plates to the aforesaid underlying plate and additional block, to retain the latter in sliding engagement with the upper face of the elongated plate, the one edge of said side plates being adapted to contact with the shoulders on the side edges of the elongated plate to limit the sliding movement of said additional block, and means to lock said additional block in its effective position.

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

JOHN M. COOPER.

Witnesses:

MAGGIE M. COOPER,

JAMES COLEMAN.