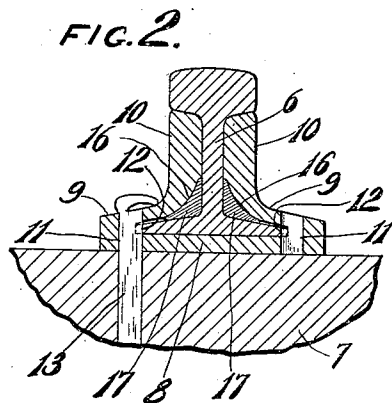
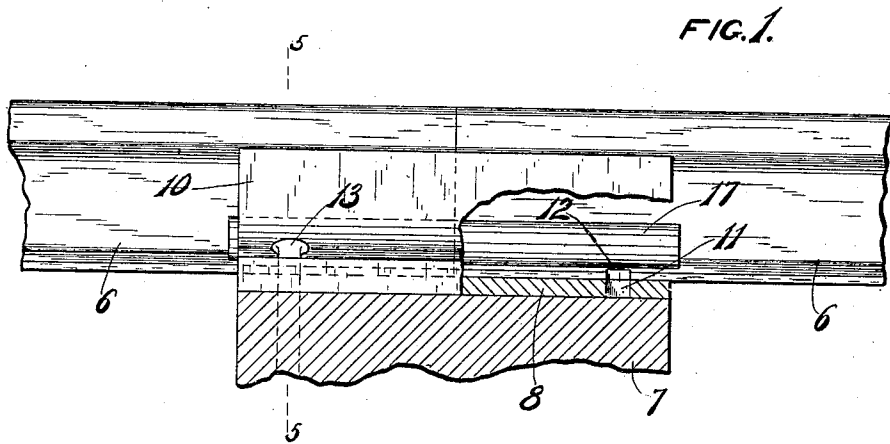


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RAILWAY JOINT CHAIR OR COUPLING.
APPLICATION FILED AUG. 10, 1908.

955,533.

Patented Apr. 19, 1910.



WITNESSES.

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DANIEL MCGILL, OF APPLETON, WISCONSIN.

RAILWAY-JOINT CHAIR OR COUPLING.

955,533.

Specification of Letters Patent.

Patented Apr. 19, 1910.

Application filed August 10, 1908. Serial No. 447,693.

To all whom it may concern:

Be it known that I, DANIEL MCGILL, residing in Appleton, in the county of Outagamie and State of Wisconsin, have
5 invented new and useful Improvements in Railway-Joint Chairs or Couplings, of which the following is a description, reference being had to the accompanying drawings, which are a part of this specification.
10 My invention has relation to improvements in railway joint chairs or couplings.

It is an important object of the invention to provide a simple form of joint chair or coupling involving a construction capable
15 of securely holding the rails at the abutting ends thereof from spreading, as well as firmly supporting and bracing the rail ends, without the use of transverse bolts passing through the rail ends.

20 With the above, and other incidental, objects in view, the invention consists of the devices and parts, or their equivalents, as hereinafter set forth.

In the accompanying drawing, Figure 1 is a side view of the invention, parts broken
25 away, and Fig. 2 is a cross section on the line 5—5 of Fig. 1.

Referring to the drawing, the numerals 6, 6 indicate the abutting rail ends, and 7
30 one of the transverse ties over which the rails extend.

The rail chair consists of a bottom portion 8, inwardly extending portions 9, 9 and upwardly extending side portions 10, 10. The
35 inwardly extending portions terminate short of each other, so that sufficient space is left between the same and between the upwardly extending side portions for the accommodation of the web of the rail. The form of the
40 chair is such as to accommodate the bases of the two abutting ends of the rail sections in the space above the bottom of the chair, and the webs of the rail ends between the upwardly extending side pieces. These upwardly
45 extending side pieces also are of sufficient height to extend directly beneath the head of the rail sections and in contact with the under side thereof, to thereby take the bearing of the rail head directly thereon,
50 the upper ends of said side pieces being shaped to conform to the shape of the under side of the head. By this arrangement, the bases of the rail sections rest on the bottom of the chair, and the under side of the heads
55 of said rail sections on the upper ends of the upwardly extending side pieces, whereby the

chair is made capable of taking the strain, and thereby forming a most firm support for the rail sections. The inwardly extending portions 9, 9 as well as the bottom of
60 the chair are provided with registering bolt openings 11, and the bases of the rail sections are provided with inwardly extending notches 12. These notches, when the rail sections are adjusted to the chair with their
65 abutting ends meeting, are adapted to register with the openings 11. Bolts or spikes 13 are driven through the registering openings 11, engage the notches 12 and enter the
70 ties. By this means the same spikes which secure the chair to the ties are also made to serve the purpose of preventing the creeping or spreading of the rail sections at the joint thereof.

It will be seen from the two figures of
75 the drawing that the inner sides of the upwardly extending portions 10 contact with the opposite sides of the web from the upper ends of said upwardly extending portions to a point below the center of the web, and
80 from this point the upwardly extending portions curve outwardly to join the correspondingly curved under faces of the inwardly extending portions 9, thereby providing spaces 16, 16. These spaces are filled
85 with filling blocks 17, 17, said filling blocks having their under sides shaped to conform to the shape of the top of the base of the rail, their inner sides conforming to and fitting
90 against the sides of the web of the rail at the lower portion of said web, and their upper sides of concave shape to conform to and fit the curved surfaces of the under sides of the inwardly extending portions 9 and the curved surfaces at the lower ends of the
95 upwardly extending portions 10. These blocks, therefore, act in the nature of wedges to assist in securely holding the parts together.

It will be noticed that the drawing shows
100 the bottom piece 8, the inwardly extending portions 9, 9 and the upwardly extending portions 10, 10 of the chair or coupling as in one piece, or an integral structure. This is the preferable construction, inasmuch as
105 economy in manufacture, and in handling is secured, and at the same time a strong and enduring device is thereby provided.

In regard to the advantages possessed by my invention, attention is called to the fact
110 that the construction is such that there are angles provided between the lower ends of

the webs of the rail ends and the tops of the bases of the rail ends, and that the blocks 17 have corresponding angles fitting therein. It will be further noted that the upper surfaces of the blocks 17 are rounded or concaved, and that the inner faces of the upwardly extending portions 10 are correspondingly rounded or convexed at their lower inner portions. This, when pressure is brought to bear on the top of the rail ends, creates a pressure on the concaved faces of the blocks and presses said blocks firmly into the angles hereinbefore referred to, and thereby, when cars are traveling over the rails, causes the chair or coupling to be brought firmly into engagement with the rail webs and the bases of the rails. These curvatures also form a brace, that is, a downward pressure in a diagonal direction from the under side of the head of the rail ends to a point at the outer edge of the meeting point of the chair with the outer edge of the bases of the rail ends.

What I claim as my invention is:

The combination of abutting railway rail ends, a one piece chair or coupling consisting of a horizontal bottom portion, in-

wardly extending portions projecting from the upper side of the base or bottom portion, and upwardly extending side portions bearing against opposite sides of the webs of the rail ends and having their upper ends bearing against the under sides of the heads of the rail ends, the said upwardly extending portions at lower inner points being of convex form, said convex portions being free from contact with the webs of the rail ends and free from contact with the upper sides of the bases of the rail ends, whereby spaces are left, and blocks fitting the spaces, said blocks having lower inner angular corners fitting the corresponding corners between the lower ends of the rail webs and the bases of the rail sections, and having upper concave sides adapted to receive the convex formations of the upwardly extending side portions of the chair.

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

DANIEL MCGILL.

Witnesses:

H. C. SLOAN,
F. M. WILSON.