F. W. MORSE.

RAIL JOINT CHAIR.

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1,064,155.

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Fig. 1.

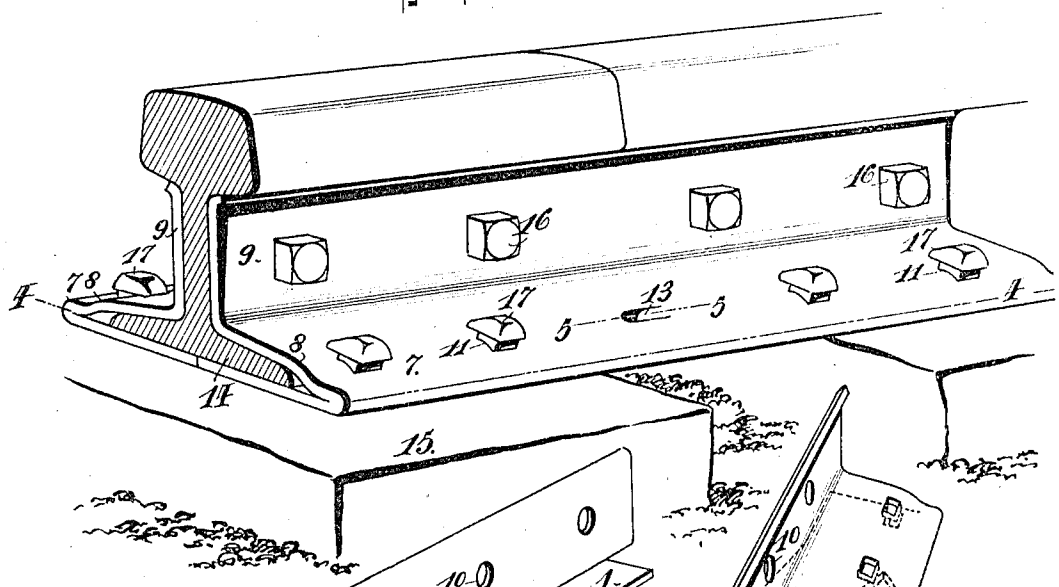

Fig. 2.

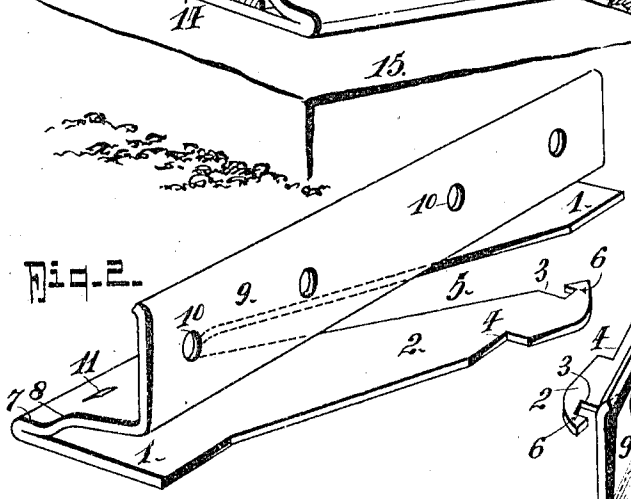

Fig. 3.

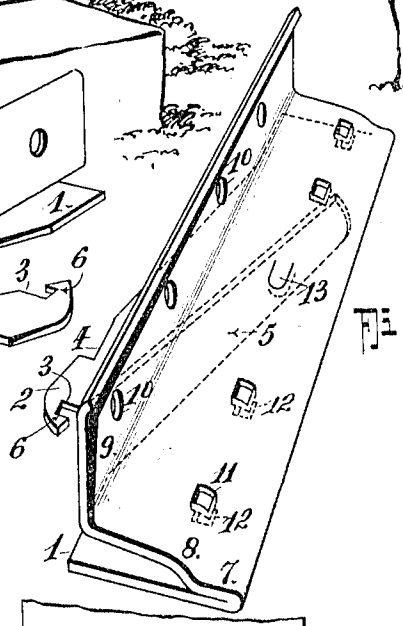

Fig. 4.

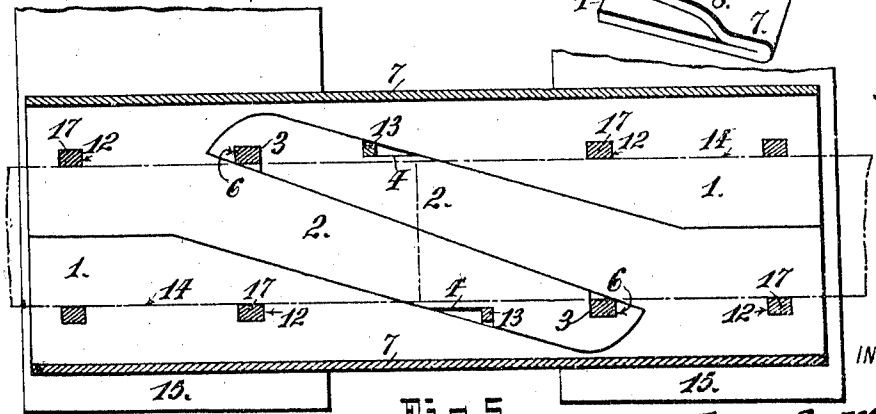

Fig. 5.

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RAIL-JOINT CHAIR.

1,064,155. Specification of Letters Patent. Patented June 10, 1913.

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To all whom it may concern:

Be it known that I, FRANK W. MORSE, residing at Los Angeles, in the county of Los Angeles and State of California, have invented certain new and useful Improvements in Rail-Joint Chairs, of which the following is a specification.

My invention has for its object to provide an improved construction of chair for joining the ends of bodies such as railroad rails, wood or iron girders, or beams, or the like, although the invention is especially adapted for securing the ends of railway rails together.

Primarily the invention has for its object to provide a coupling device which when placed at the joint of the two rails, and spiked to the ties, will form an absolute "lock."

The invention further has for its object to provide a base "lock" which may be stamped from sheet metal in two halves, each half being made from the same dies, and each half being of identical construction to the other.

Another object of the invention is to provide a device which if made from cast metal, both parts may be cast in the same molds and from the same pattern.

Again, my invention has for its object to provide a joint chair in which the parts are so correlated that the weight of the rail and the much heavier train will cause the fish plate or vertical section to adhere closer to each side of the rail.

The invention also includes those novel details of construction, combination and arrangement of parts, all of which will be first fully described, and then be specifically pointed out in the appended claims, reference being had to the accompanying drawing, in which:—

Figure 1 is a perspective view illustrating the invention in use as a rail joint chair. Figs. 2 and 3 are perspective views of the two halves of the device separated. Fig. 4 is a horizontal section taken substantially on the line 4—4 of Fig. 1. Fig. 5 is a detail section taken substantially on the line 5—5 of Fig. 1.

In the drawing in which like numerals of reference designate like parts in all the figures, it will be observed that my improved chair is composed of two identical parts, each consisting of the base plate 1, which is provided with a tapering obliquely projected tongue or member 2, that has a spike notch 3 near its outer end on one side, and a "locking" notch 4 near the same end on the other side. The base plate 1 is also cut with an oblique slot, as at 5, of the same form as the tongue 2, but reversed with respect thereto to receive the tongue 2 of the opposite section. The notch 3 is such as to provide a shoulder 6, to coöperate with the spike as it is being driven home to draw the tongue 2 into the slot or opening 5.

When the parts are made of sheet metal the metal is turned back upon itself, as at 7, and then offset, as at 8, to receive the flange of the rail 14, the metal being bent upwardly, as at 9, to form a fish plate. The fish plate 9 has the usual bolt holes 10 for the bolts 16 that secure the plates to the rails.

17 are the spikes which are passed through the holes 11 in the base 1 and the turn-back portion 7—8 and are driven into the ties 15 in the usual manner.

In order to lock the two sections of the chair together so as to make it difficult for anyone to surreptitiously remove the chair the offset portion 8 of each section is formed with a bendable tongue 13 that is adapted to be projected down into the slot 5 and notch 4 as indicated in Fig. 5, to prevent the separation of the two sections without the use of some tool such as a cold chisel for the purpose of cutting off the tongue 13 or driving it up out of the notch 4.

In operation, the chair is slipped under the ends of the rails from each side and the tongues 2 are caused to project into the slots 5, until the parts are positioned as indicated in Figs. 1 and 4. The spikes 17 and bolts 16 are then put into place. It will be observed that certain of the spikes pass through the notches 3–6, see Fig. 4, thus locking the two sections of the chair together. By withdrawing these spikes, the chair may be unlocked, unless the tongue 13 has been driven down, in which event, it will be necessary to raise the tongue 13 or cut it off before the chair sections may again be separated.

From the foregoing description, taken in connection with the accompanying drawing, it is thought the complete construction, operation and advantages of the invention will be clear. While I have described the invention as especially designed for a rail joint chair for railways, nevertheless, it will

be understood that the device may be used with equal facility for joining the ends of beams and girders, if desired.

By the use of my invention an effective joint chair for railway rails is provided which can be "locked" to prevent the separation of the sections by the employment of the tongues 13, and thus make it difficult for unauthorized persons to disconnect the ends of rails without detection.

What I claim is:—

1. A rail joint chair, comprising two like sections, each consisting of a base portion having an obliquely projecting tongue and a corresponding slot adjacent said tongue, the tongue of one section adapted to lie in the slot of the other section, each of said sections including rail base engaging members, and removable means passing through said members for "locking" said members together.

2. A rail joint chair, comprising two like sections, each consisting of a base portion having an obliquely projecting tongue and a corresponding slot adjacent said tongue, the tongue of one section adapted to lie in the slot of the other section, each of said sections including rail base engaging members, and removable means passing through said members for "locking" said members together, and an auxiliary locking means for locking said members together, said auxiliary locking means including a bendable element on one member for engaging a notch on the tongue of the other member to prevent movement of the tongues in their slots.

3. A rail joint chair comprising two oppositely disposed rail engaging members, each having base portions, each of said base portions including projections and projection receiving slots extending obliquely fully across and beyond the base flange of the rail, said projections having spike receiving recesses, each of said members having spike holes, certain of the spike holes of one section cooperating with the spike receiving recess of the projection of the other section, substantially as shown and described.

4. A joint chair comprising two oppositely disposed engaging members, each including a base plate section, each base plate section including an obliquely extending tongue and an adjacent slot of the same configuration as the tongue and arranged reversely thereto, whereby the tongue of one section will enter and fit the slot of the opposite section, each of said tongues having a spike notch, each of said members including upper portions having spike holes alining with said spike notches when the parts are assembled, substantially as shown and described.

5. A joint chair comprising two oppositely disposed engaging members, each including a base plate section, each base plate section including an obliquely extended tongue and an adjacent slot of the same configuration as the tongue and arranged reversely thereto, whereby the tongue of one section will enter and fit the slot of the opposite section, each of said tongues having a spike notch, each of said members including upper portions having spike holes alining with said spike notches when the parts are assembled, said tongues including locking element receiving notches, each of said members having locking elements, the locking element of one member adapted to be bent to engage in the notch of the tongue of the opposite member when the parts are assembled to hold the two members from separation.

FRANK W. MORSE.

Witnesses:
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