

(No Model.)

J. ALBRECHT.
COMBINED RAIL CHAIR AND TIE.

No. 530,496.

Patented Dec. 11, 1894.

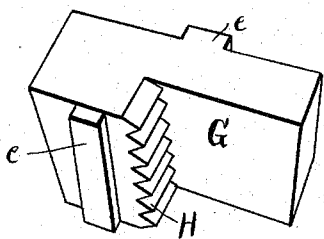
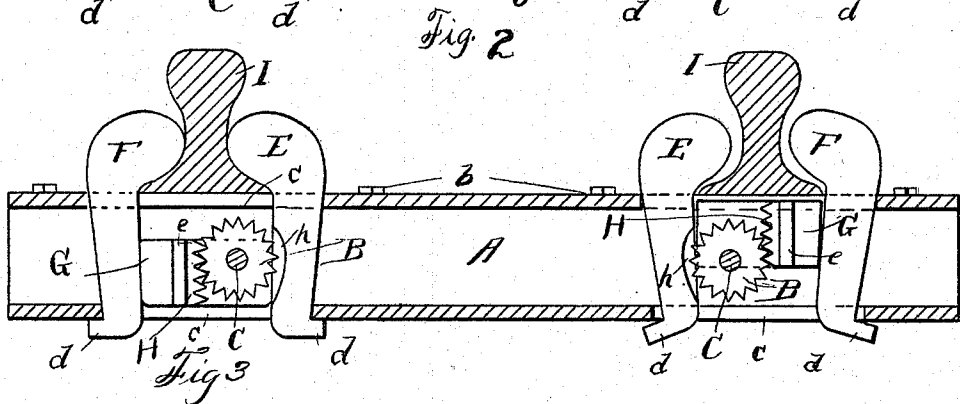
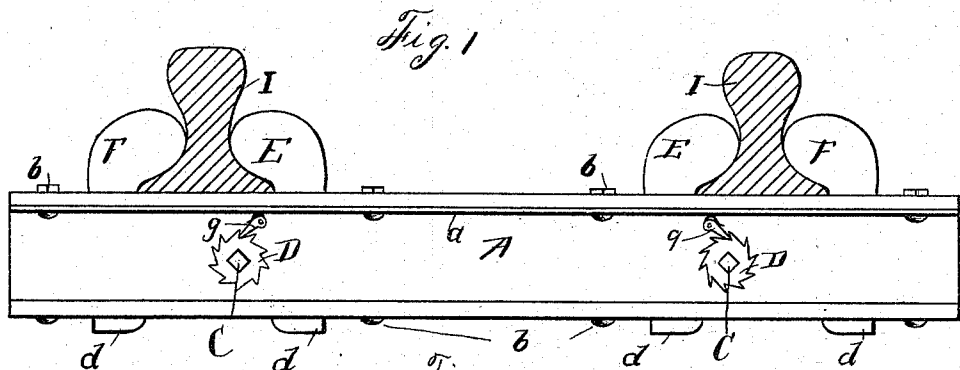


Fig. 4

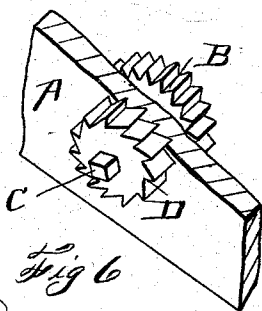
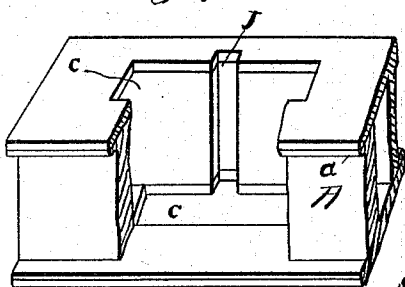
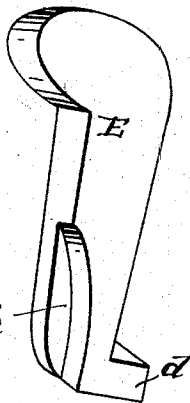
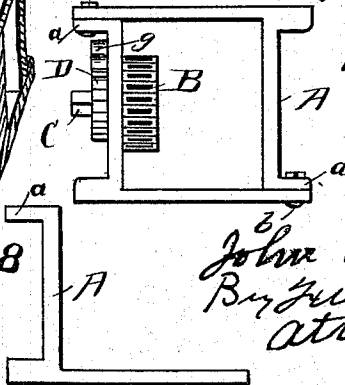


Fig. 5



WITNESSES
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Fig. 7



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UNITED STATES PATENT OFFICE.

JOHN ALBRECHT, OF MASSILLON, OHIO.

COMBINED RAIL CHAIR AND TIE.

SPECIFICATION forming part of Letters Patent No. 530,496, dated December 11, 1894.

Application filed October 25, 1894. Serial No. 526,904. (No model.)

To all whom it may concern:

Be it known that I, JOHN ALBRECHT, a citizen of the United States, residing at Massillon, in the county of Stark and State of Ohio, have
5 invented certain new and useful Improvements in a Combined Rail Chair and Tie; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, and
10 to the letters of reference marked thereon, in which—

Figure 1, is a side elevation of the tie, showing the different parts placed in proper position to lock or hold the rails. Fig. 2, is a longitudinal section, showing the different parts placed in locked and unlocked positions. Fig. 3, is a detached view of one of the locking wedges or blocks. Fig. 4, is a
15 view showing a portion of one side of the tie, and illustrating the position of the ratchet wheel and cog wheel together with their shaft. Fig. 5, is a detached view of one of the rail clamping dogs. Fig. 6, is an end view of the tie. Fig. 7, is a view showing a portion of the tie, and illustrating parts broken away to
20 better show the grooves and slots. Fig. 8, is an end view of one of the tie sections or halves.

The present invention has relation to combined rail chairs and ties, and it consists in the different parts and combination of parts hereinafter described and particularly pointed out in the claims.

Similar letters of reference indicate corresponding parts in all of the figures of the drawings.

In the accompanying drawings A, represents the tie sections, which are substantially of the form shown in Figs. 6 and 8, and when placed
40 together the two sections or parts form a hollow tie which is of the form shown in Fig. 6, and for the purpose of providing a means for properly bolting or riveting the parts together the flanges *a*, are provided, and the clamping
45 bolts or rivets *b* placed in the position illustrated in the drawings.

Within the tie proper are located the cog wheels B, which cog wheels are securely attached to the shafts C, which shafts are extended through one side of the tie, and upon
50 said extended portions are located the ratchet wheels D. For the purpose of rotating the

shafts C they are extended a short distance beyond the outer faces of the ratchet wheels D, said extended portions, being angular so
55 that a wrench can be applied to rotate the shafts C, and the cog wheels. The locking dogs E and F are located substantially as illustrated in Figs. 1 and 2, and their top or upper ends formed so as to embrace the bottom or lower portions of the railway rails,
60 when said dogs are brought into proper position to clamp the rails.

Between the dogs E and F, are located blocks or wedges G, which blocks or wedges
65 are provided with the toothed shoulders or flanges H, which toothed shoulders or flanges mesh with their respective cog wheel B, as illustrated in Fig. 2.

For the purpose of providing a means for properly entering the dogs E and F, the top and bottom of the tie are provided with the elongated slots *c*, which slots are formed of such a length that they will properly hold the dogs E and F, to clamp the rails I, after the
70 block or wedges G have been placed in the position indicated at the left hand end of Fig. 2.

For the purpose of preventing the dogs E and F, from moving upward their bottom or lower ends are provided with the hooks or flanges *d*, which hooks or flanges embrace the bottom or under side of the tie proper, after said dogs have been brought or forced into position to lock or clamp the rails.
85

In use the dogs E and F are placed through the tie proper, after which the blocks or wedges are placed between said dogs so that their ends will abut against the inner edges of the dogs, which position brings the toothed
90 shoulders into engagement with the toothed wheels B. The shafts are then rotated by means of a suitable wrench or its equivalent in the direction that will force the blocks or wedges downward, thereby spreading the bottom or lower ends of the dogs, and bringing the top or upper ends of said dogs against the railway rails.
95

It will be understood that the ends of the elongated slots *c*, formed in the top or upper side of the tie, will act as fulcrums for the dogs E and F.

The elongated slots *c* formed in the bottom of the tie should be of such a length that will

admit the bottom or lower ends of the dogs E and F to be moved away from each other; but the length of said slots is such that when said dogs are spread at their bottom or lower ends, the hooks or flanges *d* will come under the tie as illustrated at the left hand end of Fig. 2.

For the purpose of causing the blocks or wedges G to move up and down in a true vertical line, said blocks are provided with the flanges *e*, which flanges are received into the grooves *f*, which grooves are formed in the tie proper.

For the purpose of holding the blocks or wedges G in proper position to clamp the rails the ratchet wheels D, and the pawls *g* are provided, said parts being located and arranged substantially as shown in Fig. 1.

For the purpose of providing means for better rolling the ties proper, said ties are formed of the L shaped sections A, which sections can be shipped from a rolling mill before they are bolted together if desired, thereby greatly reducing the bulk of the ties.

In Fig. 3 the block or wedge G, is shown somewhat enlarged, but it will be understood that said block or wedge is to be so formed that it can be passed through the upper slot *c*.

For the purpose of providing room for the cog wheels B, the locking dogs E may be provided with the cut-out portions *h*, but this is not absolutely necessary, as the dogs may be formed so as to clear the wheels B.

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

1. The combination of a railway tie formed of L shaped sections, bolted or riveted together, the rail clamping dogs extended above and below the tie, the blocks or wedges G lo-

cated between the dogs, and provided with the toothed shoulders H, the cog wheels B meshing with the toothed shoulders, the ratchet wheels D mounted upon the shafts C, and the pawls *g*, substantially as and for the purpose specified.

2. The combination of a railway tie provided with slots formed in the top and bottom of the tie, the locking dogs provided with hooked or flanged lower ends and curved upper ends, the blocks or wedges G, located between the dogs and within the tie, and provided with the toothed shoulders, and the toothed wheels B, substantially as and for the purpose specified.

3. The combination of the L shaped sections A formed to produce a hollow tie, and the sections bolted together substantially as and for the purpose specified.

4. The combination of a hollow tie provided with rail clamping dogs, a toothed block or wedge located between the locking dogs, a cog wheel meshing with the toothed block or wedge, a ratchet wheel and pawl, and a shaft C, substantially as and for the purpose specified.

5. The combination of a hollow tie provided with rail clamping dogs, a toothed block or wedge provided with the flanges *e*, grooves *f* formed in the sides of the tie, and means for forcing the block or wedge downward to clamp the rails, substantially as and for the purpose specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

JOHN ALBRECHT.

Witnesses:

ROBT. W. MCCAUGHEY,
F. W. BOND.