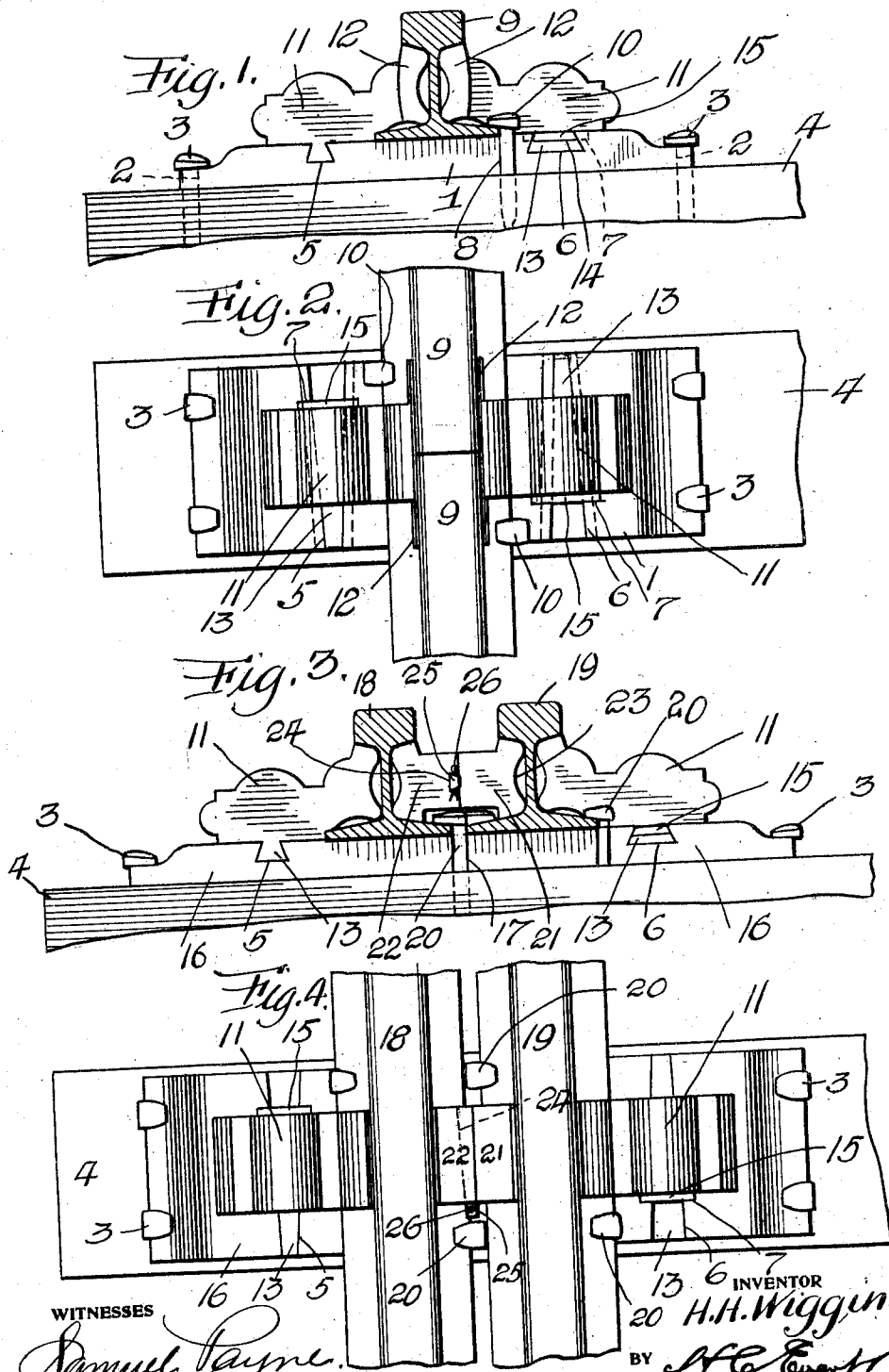


H. H. WIGGINS.
RAIL CHAIR AND FASTENER.
APPLICATION FILED MAR. 1, 1912.

Patented Oct. 29, 1912.

2 SHEETS—SHEET 1.

1,042,993.



WITNESSES

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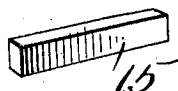
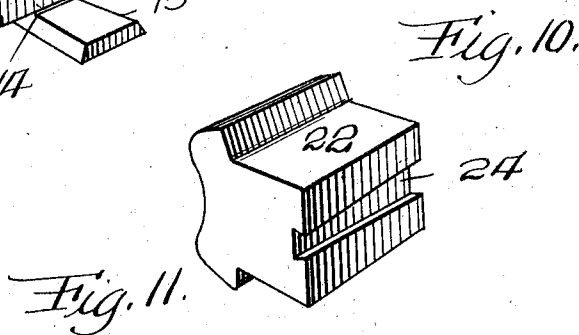
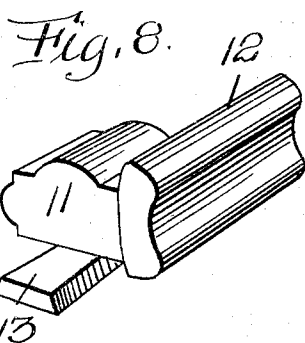
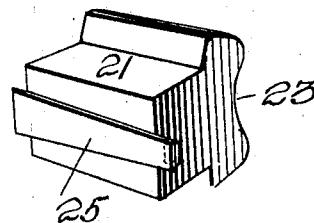
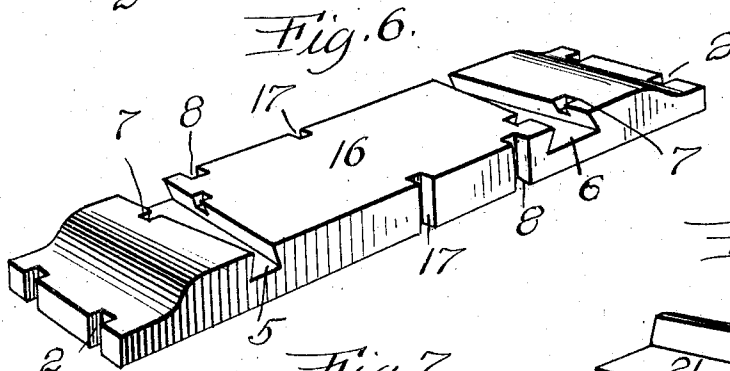
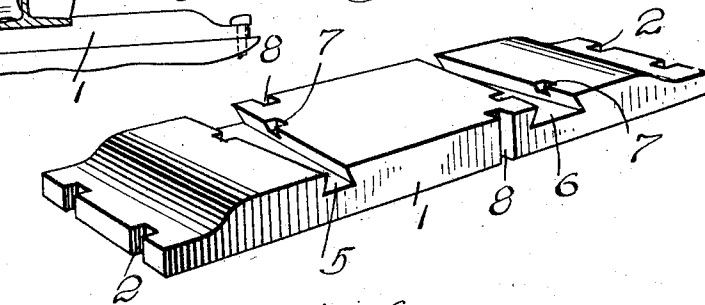
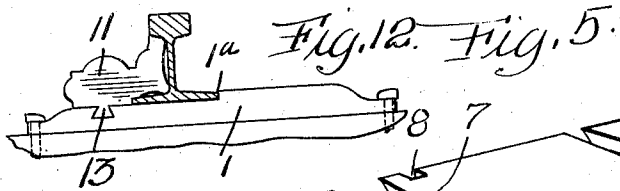
BY *H. C. Everett*

ATTORNEYS

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UNITED STATES PATENT OFFICE.

HENRY HARRY WIGGINS, OF PITTSBURGH, PENNSYLVANIA.

RAIL CHAIR AND FASTENER.

1,042,993.

Specification of Letters Patent.

Patented Oct. 29, 1912.

Application filed March 1, 1912. Serial No. 680,872.

To all whom it may concern:

Be it known that I, HENRY HARRY WIGGINS, a citizen of the United States of America, residing at Pittsburgh, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Rail Chairs and Fasteners, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to rail chairs and fasteners, and the primary object of my invention is to provide a rail chair that can be used in connection with wooden, metallic or composite ties for supporting rails, whereby the rails cannot become accidentally displaced.

Another object of this invention is to provide strong and durable rail fasteners that can be easily and quickly placed in position to firmly brace rails.

A further object of this invention is to provide a novel brace that can be used in connection with a guard rail in connection with my improved fasteners, the brace cooperating with the fasteners in maintaining the guard rail a prescribed distance from a main rail.

A still further object of this invention is to accomplish the above results by a mechanical construction that is highly efficient for the purposes for which it is intended in connection with a steam railway.

With the above and other objects in view, the invention resides in the novel construction, combination and arrangement of parts to be hereinafter specifically described and then claimed.

Reference will now be had to the drawings, wherein like numerals denote corresponding parts throughout the several views, in which:—

Figure 1 is a side elevation of the chair and rail fastener in connection with a rail joint, Fig. 2 is a plan of the same, Fig. 3 is a side elevation of the chair and rail fastener in connection with a guard rail, Fig. 4 is a plan of the same, Fig. 5 is a perspective view of a chair designed for a rail joint, Fig. 6 is a similar view of a chair designed for two rails, Fig. 7 is a perspective view of a detached rail fastener, Fig. 8 is a similar view of a fastener designed for a rail joint, Fig. 9 is a perspective view of a brace member for a guard rail, Fig. 10 is a similar view of another brace member. Fig. 11 is a perspec-

tive view of a locking bar, and Fig. 12 is a side elevation of a modified form of fastener.

The reference numeral 1 denotes a chair in the form of a plate that is rectangular in plan and having the central part thereof of a greater thickness than the ends of said plate. The ends of the plate are provided with notches 2 for spikes 3 that are employed for securing the chair to a wooden tie 4. Bolts or other fastening means can be substituted for the spikes 3 when the chair is placed upon a metallic or concrete tie. The top of the plate is provided with tapering dove-tail grooves 5 and 6, the groove 5 tapering in an opposite direction from the groove 6. The walls of the grooves 5 and 6, adjacent to the large ends of said grooves are provided with oppositely disposed seats 7, and the sides of the chair, adjacent to the large ends of said grooves, are provided with slots 8.

The chair provides a seat for a single rail or the confronting ends of rails 9 and after said rails are placed upon the chair, spikes 10 are driven through the slots 8 into the tie 4 to hold the rails in position.

The chair fasteners shown in Figs. 1, 2 and 8 comprise blocks 11 having integral splice bars 12 for bracing the sides of the rails 9. The blocks 11 are provided with dove-tail tapering tongues 13 to slide in the grooves 5 and 6. The large ends of the tongues 13 are cut away, as at 14, to provide recesses extending under the blocks 11. After the fasteners have been placed in position and driven until the recesses 14 clear the seats 7, locking bars 15 are then placed in the seats 7 of the chair and if the fasteners are then shifted or worked back in the opposite direction, the blocks 11 will extend over a portion of the locking bars 15 due to the fact that the locking bars will extend into the recesses 14 and under such conditions prevent accidental displacement of said bars.

When a single rail is to be supported upon the chair the fastener shown in Fig. 7 can be used, the block 11 of said fastener having the end thereof shaped to brace the side of the rail. This fastener is the same as the fastener shown in Fig. 8 with the exception that the splice bar 12 is dispensed with.

Reference will now be had to Figs. 3, 4, 6, 9 and 10 showing the chair and fasteners in connection with a guard rail. The chair

is designated 16 and is similar to the chair 1 with the following exceptions. It is of a greater length and intermediate the ends thereof the side walls have spike slots 17. 5 18 denotes a main rail located upon the chair and 19 a guard rail. After these rails have been positioned upon the chair, spikes 20 are driven in the slots 8 and 17 to hold the rails in position. Fasteners similar to 10 that shown in Fig. 7 are used and in addition to these fasteners, bracing members 21 and 22 are placed between the rails. The members 21 and 22 are in the form of blocks having heads 23 engaging the sides of the 15 rails 18 and 19. The member 22 has a dove-tail groove 24 to receive a dove-tail tongue 25 carried by the member 21, and after these members have been placed in position, a cotter pin 26 is placed in the end of the 20 tongue 25 to lock the bracing members together.

In Fig. 12 there is illustrated a modification of the invention, wherein the chair 1 has a shoulder 1^a that serves functionally 25 as an inner rail fastener, said shoulder engaging the inner edge of the base flange of the rail, while an outer fastener, similar to that illustrated in Fig. 7, is used to brace the outer side of the rail.

30 It is thought that the manner of assembling the rail fasteners will be apparent without further description, and while in the drawings there is illustrated a preferred embodiment of the invention, it is to be understood that the structural elements are susceptible of such variations as fall within the 35 scope of the appended claims.

What I claim is:—

40 1. In a rail chair, the combination with rails, of an oblong plate adapted to sup-

port rails, said plate having dove-tail tapering grooves formed therein with one of said grooves tapering in an opposite direction from the other of said grooves, the walls of said grooves having oppositely disposed 41 seats formed therein, fasteners having dove-tail tapering tongues adapted to engage in the grooves of said plate, the tongues of said fasteners being cut away, locking bars arranged in the seats of said plate and extending transversely of the cut away portions of the tongues of said fasteners, and spikes co-operating with said fasteners in retaining 50 said rails upon said plate.

2. In a rail chair, the combination with 51 parallel rails, of an oblong plate adapted to support rails, said plate having dove-tail tapering grooves formed therein with one of said grooves tapering in an opposite direction from the other of said grooves, the 60 walls of said grooves having oppositely disposed seats formed therein, fasteners having dove-tail tapering tongues adapted to engage in the grooves of said plate, the tongues of said fasteners being cut away, locking 61 bars arranged in the seats of said plate and extending transversely of the cut away portions of the tongues of said fasteners, spikes co-operating with said fasteners in retaining 70 said rails upon said plate, bracing members arranged between said rails, and a tapering dove-tail tongue carried by one of said members and engaging in the other of said 71 members.

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

HENRY HARRY WIGGINS.

Witnesses:

MAX H. SROLOVITZ,
CHRISTINA T. HOOD.