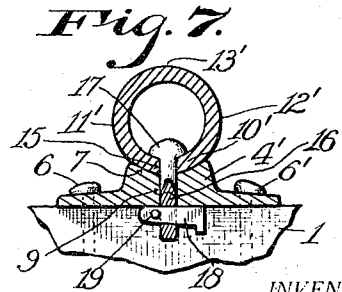
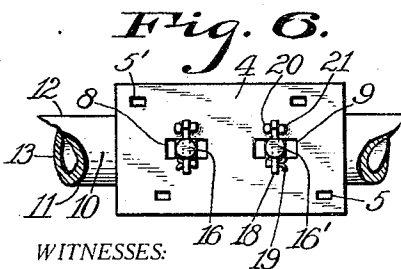
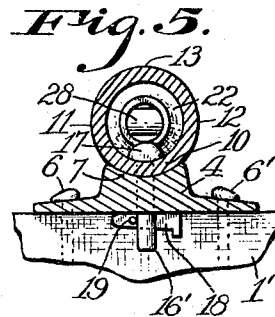
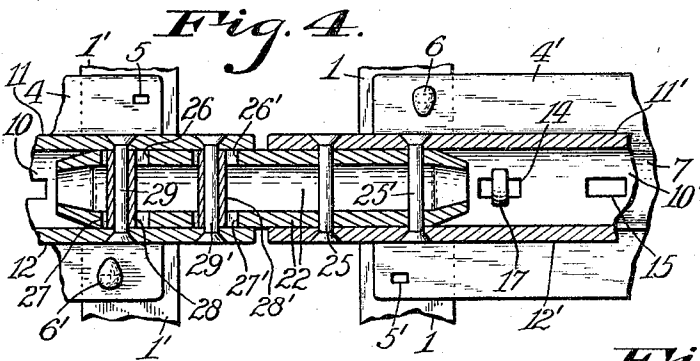
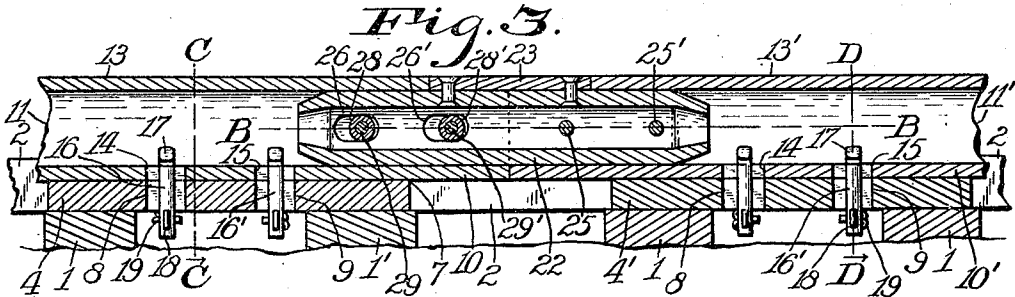
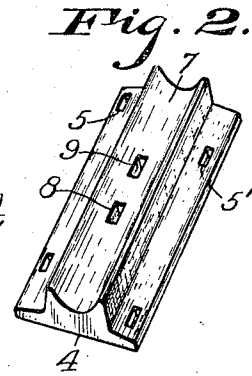
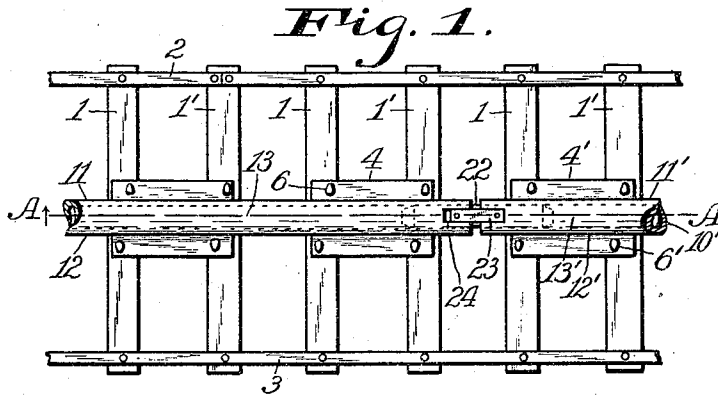


J. JACKSON.
RAILWAY, RAIL, AND SUPPORTS.
APPLICATION FILED JUNE 3, 1914.

1,122,397.

Patented Dec. 29, 1914.



WITNESSES:
J. H. Gardner.
M. E. Sparrow.

INVENTOR:
Jerome Jackson.
BY
E. J. Silvius,
ATTORNEY.

UNITED STATES PATENT OFFICE.

JEROME JACKSON, OF SAN FRANCISCO, CALIFORNIA.

RAILWAY, RAIL, AND SUPPORTS.

1,122,397.

Specification of Letters Patent.

Patented Dec. 29, 1914.

Original application filed October 18, 1913, Serial No. 795,863. Divided and this application filed June 3, 1914. Serial No. 842,656.

To all whom it may concern:

Be it known that I, JEROME JACKSON, a citizen of the United States, residing at San Francisco, in the county of San Francisco and State of California, have invented a new and useful Railway, Rail, and Supports, of which the following is a specification, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon.

This invention relates to a railway that comprises a single main rail for supporting and guiding engines or cars, and two balancing rails, the invention having reference more particularly to the main rail and its supports substantially as and for the purposes shown in my prior application for Letters Patent of the United States, filed October 18, 1913, Serial No. 795,863, of which this is a divisional application for Letters Patent.

An object of the invention is to provide improved railway construction of simple and substantial form especially adapted to insure safety in operation and which may be constructed at the minimum cost and so as to be inexpensive in maintenance relatively to the type of railway in common use.

Another object of the invention is to provide an improved rail which shall be so constructed as to be very stiff and strong without entailing excessive weight while being sufficiently large to permit of the use of guide wheels on the sides of the rail and below the tread, in order to positively prevent derailment of the rolling stock, especially at excessively high speed or on curves.

A still further object is to provide railway construction which may be simply and cheaply provided for temporary use either as passenger, freight, or mine roads, or for pleasure or amusement purposes.

With the above-mentioned and other objects in view, the invention consists in a railway track comprising a large central rail for supporting and guiding the rolling stock, and two relatively small and cheap balancing rails for maintaining the rolling stock in upright position, the invention consisting further in a rail of novel construction and in the parts and combinations and arrangements of parts as hereinafter particularly described and further defined in the accompanying claims.

Referring to the drawings, Figure 1 is a

fragmentary top plan of the improved railway; Fig. 2, a perspective view of one of the improved chairs or rail supports; Fig. 3, a vertical section on the plane of the line A A in Fig. 1; Fig. 4, a horizontal section on the plane of the line B B in Fig. 3; Fig. 5, a transverse section of the improved rail on the line C C in Fig. 3; Fig. 6, an inverted plan of the chair and main rail, and Fig. 7 is a transverse section of the improved rail and chair on the plane of the line D D in Fig. 3.

Similar reference characters throughout the different figures of the drawings indicate corresponding elements or features of construction herein referred to.

The improved railway as preferably constructed includes rail ties 1 and 1' suitably spaced apart to comprise pairs of ties so that each pair shall support one of the improved rail chairs, and two balancing rails 2 and 3 are suitably secured upon the rail ties in proximity to the two ends respectively of the ties. The rails may be metallic and in some cases, for small rolling stock, may be wooden. While it is desirable that the rails be properly surfaced, they are not usually required to be in exact alinement since they are designed to guide or support flangeless wheels.

The railway includes also a novel form of chair or rail support 4, 4', of suitable number all being alike, and each chair is supported jointly upon the middle portions of two rail ties, each chair having apertures 5, 5', therein to receive spikes 6, 6', whereby the chairs are secured to the ties, and obviously other devices than the spikes may be employed for the purpose if preferred. Each rail chair has a rail seat 7 on its upper portion which extends longitudinally as a groove in the present case adapted to conform to the contour of the desired form of rail. The chair has sufficient thickness under the seat to afford substantial support for the rail which is arranged thereon and midway between the rails 2 and 3. Each chair has preferably two slots 8 and 9 extending vertically therethrough and also longitudinally of the chair for receiving securing devices. The improved main rail consists as usual of a large number of sections spliced together to constitute a practically continuous rail, a description of two contiguous sections of the rail being sufficient to an un-

derstanding of the invention. Each rail section preferably is tubular in order to provide the maximum stiffness and required guiding and supporting surface with the minimum weight and so as to have ample diameter for the purpose intended.

Each rail, being hollow, has a supporting bottom portion 10 or 10', two side portions 11 and 12, or 11' and 12', and a top or tread portion 13 or 13', the section being arranged with the bottom portion upon the seat 7 of the chairs, the side guiding portions extending out beyond the chairs. The bottom portion of each rail section has a suitable number of slots 14 and 15 therein arranged so as to correspond with the slots 8 and 9 to receive securing bolts 16 and 16', each bolt having a T-head 17 thereon so that the bolts may be inserted from below and afterward turned to bring the T-head crosswise of the slots or so as to extend transversely of the rail and engage the rail on opposite sides of the slots. Each bolt preferably is secured in place so as to firmly secure the rail to the chair by means of a tapering key 18 driven into a suitable slot in the bolt and against the under side of the chair, each key being prevented from accidental displacement when loose by means of a split pin 19 inserted in the smaller portion of the key. The under side of the chair is provided with projections 20 and 21 between which the key is arranged in order to prevent accidental turning of the bolt in case it becomes slightly loose. The securing bolts are conveniently arranged between the two of the pair of ties supporting the chair so as to be readily accessible for inspection or repairs.

Each two adjacent rail sections are spliced or connected together by means of a splice-bar or dowel 22 which is of novel form and provided for the purpose, preferably of tubular form, each being provided on the normal upper side thereof with a longitudinal rib 23 which extends into suitable slots 24 formed in the upper portion 13 or 13' of the wall of the rail section so as to carry the wheels of the rolling stock smoothly across the space between the two rails or sections when the latter are contracted in length, the splice-bar being inserted snugly into the end portions of the sections. The splice-bar is rigidly secured in one of the rail sections by means of horizontal rivets 25 and 25' and extends movably into the opposite rail section but practically prevents lateral movement of the rail sections, each with respect to the other, so that they are maintained in perfect alinement. The splice-bar has horizontally arranged slots 26 and 26' in one portion and similar slots 27 and 27' in the opposite portion of the wall thereof, the bar preferably being hollow, and thimbles 28 and 28' are inserted in the slots and secured to the side walls of the rail section by means

of rivets 29 and 29' respectively that are driven and upset when hot but are prevented by the thimbles from bending, the thimbles also preventing the rivets from drawing the rails so tightly to the bar or dowel as to prevent slight movement due to expansion or contraction of the rail section. When expansion or contraction occurs the thimbles slide in the slots of the splice-bar or dowel.

In the practical use of the improved railway the main rail supports and guides the engines or cars, each truck of which has one or more main supporting wheels adapted to roll upon the top of the main rail, and also guide rollers adapted to roll along the side portions 11 and 12 and provided on their lower ends with flanges that extend under the side portions so that the main wheels cannot accidentally leave the rail, the truck having also balancing wheels that are carried above the rails 2 and 3 or upon the rails, without imposing much weight upon the rails unless the load on the truck is unbalanced, when either balancing rail may be required to support a proportion of the load, especially when the truck is at rest.

Having thus described the invention, what is claimed as new is—

1. A railway rail including a plurality of hollow sections arranged end to end, one section having a splice bar rigidly secured therein that extends movably into and is connected with the adjacent section, the bar having a rib on the normal upper side thereof, each section having a slot in its upper wall receiving the rib.

2. A railway rail including a plurality of tubular rail sections horizontally arranged end to end, the normal upper portion of the end of each section having a longitudinal slot therein, and a hollow splice bar inserted in the adjacent ends of the two rail sections and having a rib thereon extending into the slots and to the plane of the top of the sections, the bar being fixedly secured to one and adjustably connected with the adjacent one of the adjacent rail sections.

3. In a railway, the combination of two tubular rail sections horizontally arranged end to end, a tubular splice bar inserted in the adjacent ends of the two rail sections and having horizontal slots in its wall in proximity to one end thereof within one of the sections, a thimble movably arranged horizontally in the slots, a rivet extending through the thimble and the opposite portions of the walls of the rail section and secured thereto, and a rivet horizontally extending through the adjacent rail section and the bar and securing the bar to the section.

4. In a railway, the combination of a plurality of rail sections arranged end to end, each rail section being cylindrical and hollow, the normal upper portion of the end

of each section having a longitudinal slot therein, the normal lower portion of each section having a plurality of apertures therein to receive securing devices, a cylindrical splice bar inserted in the adjacent ends of the rail sections and having a longitudinal rib on its upper portion that extends into the slots and to the plane of the top of the sections, a device for fixedly securing the bar to one of the sections, and a device for adjustably connecting the bar to the adjacent one of the sections.

5. In a railway, the combination of a series of rail ties, a plurality of rail sections arranged end to end and collectively extending over the middle portions of the ties, each rail section being cylindrical and hollow, a plurality of cylindrical splice bars embraced in the rail sections, each bar being fixedly

secured to one and adjustably connected with the adjacent one of two adjacent rail sections, a series of rail chairs secured upon the middle portions of adjacent ties and supporting the rail sections, the tops of the chairs conforming to the curvature of the under portion of the cylindrical rail sections, means for securing the rail sections to the chairs, and two other rails differing from said cylindrical rail sections secured upon the ties equi-distant from opposite sides respectively of said cylindrical rail sections.

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

JEROME JACKSON.

Witnesses:

HUGH CROSBY,
ALEXR. B. BROWN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."