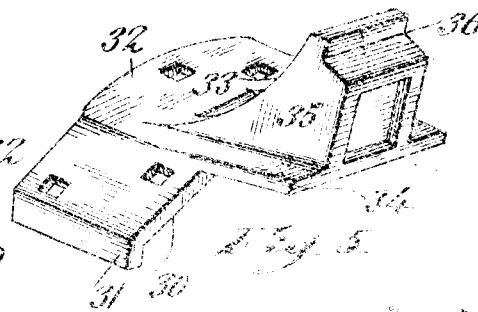
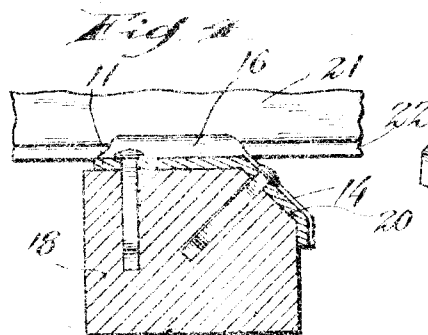
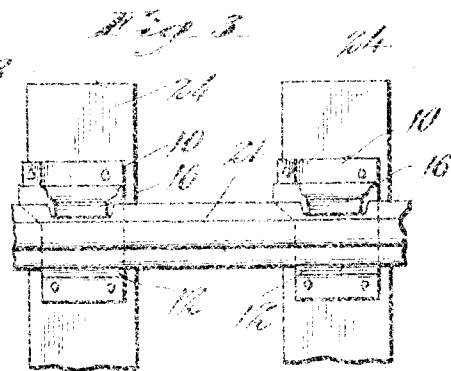
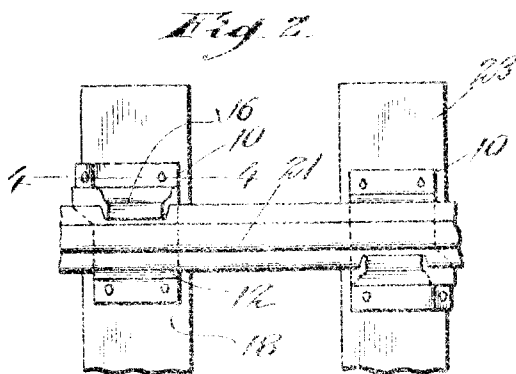
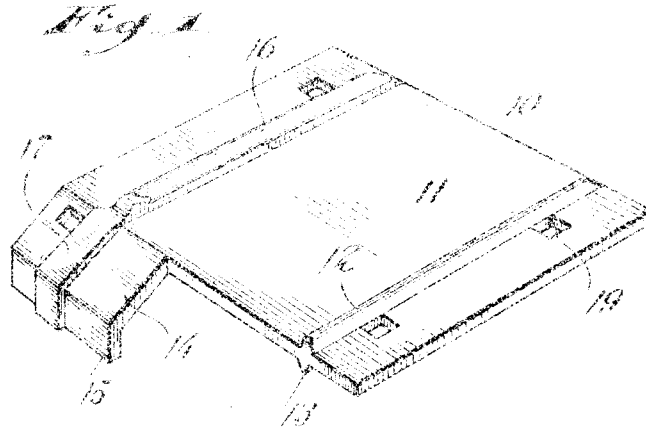


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RAIL CHAIR.
APPLICATION FILED OCT. 11, 1912.

1,065,770.

Patented June 24, 1913.
2,325,175-CHART.



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2 SHEETS-SHEET 2.

Fig. 6.

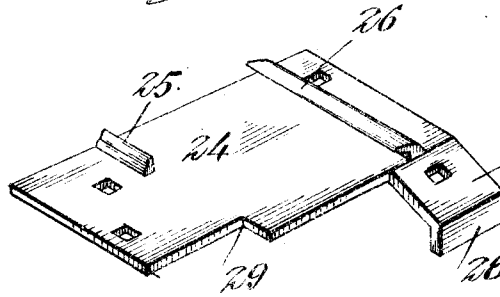


Fig. 7.

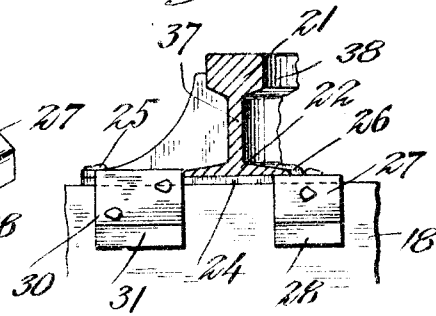


Fig. 8.

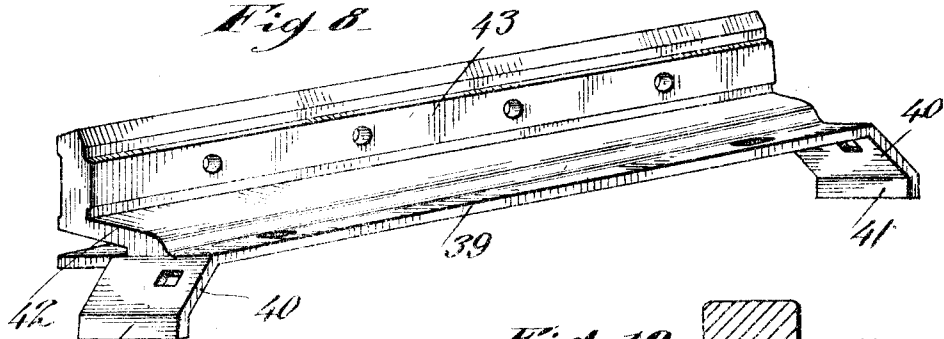


Fig. 9.

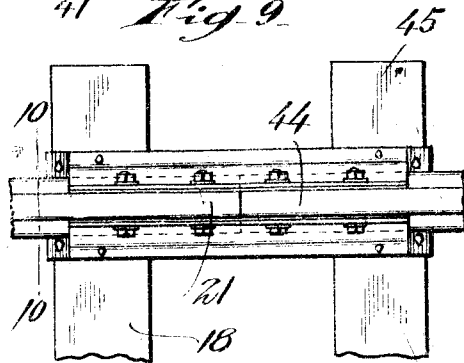
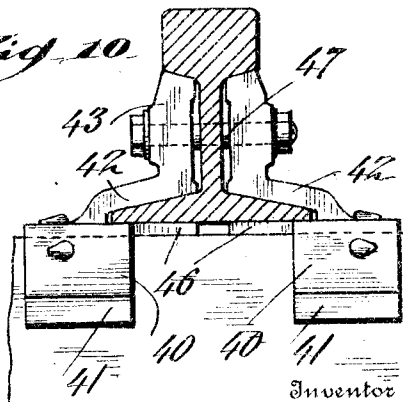


Fig. 10.



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UNITED STATES PATENT OFFICE.

FREDERICK C. BAUER, OF EAST CAMDEN, NEW JERSEY.

RAIL-CHAIR.

1,065,770.

Specification of Letters Patent.

Patented June 24, 1913.

Application filed October 11, 1912. Serial No. 725,233.

To all whom it may concern:

Be it known that I, FREDERICK C. BAUER, a citizen of the United States, residing at East Camden, in the county of Camden and State of New Jersey, have invented new and useful Improvements in Rail-Chairs, of which the following is a specification.

An object of the invention is to provide a chair for supporting rails.

The invention embodies, among other features, a chair which is rigidly attached to the usual ties for supporting the rails thereon, the chair being arranged so as not to prevent the usual longitudinal expansion and contraction of the rails due to the influences of heat and cold.

In the further disclosure of the invention reference is to be had to the accompanying drawings, constituting a part of this specification, in which similar characters of reference denote corresponding parts in all the views, and in which:

Figure 1 is a perspective view of the rail chair; Fig. 2 is a plan view of a plurality of ties showing the rail chairs thereon; Fig. 3 is a similar plan view showing the rail chairs in slightly different position; Fig. 4 is an enlarged vertical sectional view taken on the line 4-4 in Fig. 2; Fig. 5 is a perspective view of the brace used in connection with the rail chairs; Fig. 6 is a modified form of rail chair for use with the brace shown in Fig. 5; Fig. 7 is a vertical transverse sectional view of a rail chair showing the chair disclosed in Fig. 6 and the brace disclosed in Fig. 5 mounted on a tie to support the rail; Fig. 8 is a perspective view of a modified form of my device; Fig. 9 is a plan view showing the manner of applying the structure disclosed in Fig. 8; and Fig. 10 is a vertical transverse sectional view taken on the line 10-10 in Fig. 9.

Referring more particularly to the views, the complete chair is designated by the numeral 10 and comprises a plate 11 having an upper rib 12 and a lower rib 13 formed therewith, a flange 14 being formed with the plate 11 and extended from one side thereof at an angle oblique to the horizontal plane of the plate 11, the said flanges 14 terminating in a lip 15 as shown in Fig. 1. A rib 16 is formed with the plate 11, the said rib being bent along the upper portion thereof and spaced from the upper rib 12, one end of the rib 16 being flattened to form

an auxiliary rib 17 extending over and across the flange 14.

In the use of the structure shown in Fig. 1, the plate 11 is fastened to a tie 18 by passing suitable spikes through openings 19 in the plate, the lower rib 13 being adapted to press into the tie, thus aiding in securing the plate 11 rigidly on the tie, with the flange 14 projecting across an inclined face 20 of the tie 18 as shown in Fig. 4, the lip 15 being adapted to extend across one of the sides of the tie. The usual rail 21 is mounted on the plate 11, between the upper rib 12 and the curved rib 16 with the forward or upper portion of the rib 16 projecting across the base 22 of the rail as shown in Fig. 2. A second tie 23 is shown in Fig. 2 and a chair similar to the chair 10 is mounted on the second tie 23 to support the rail 21, the chair on the second tie 23, however, being arranged thereon in an opposite position to the position of the chair on the tie 18. Now referring to Fig. 3, it will be seen that the chairs can be mounted in the same positions on ties 24, supporting the rail 21, it being readily understood that the particular position of the chair relatively to the tie and rail depends upon the manner in which the rails are mounted.

In Fig. 6 I disclose a modified form of chair and in which a plate 24 is provided with a short upper rib 25 and a curved rib 26, spaced from the rib 25 the same as the rib 12 is spaced from the rib 16, the plate 24 being also provided with a flange 27, terminating in a lip 28 and similar to the flange 14 and lip 15, the mentioned plate 24, however, being provided with a cut away portion 29 to receive a flange 30, having a lip 31, and constituting a part of a brace 32 including a plate 33, the mentioned flange 30 being formed with the plate and projecting from one side thereof at an oblique angle to the horizontal plane of the plate. The forward edge 34 of the plate 33 is preferably bent slightly upward and formed therewith is a head 35 provided with a cut away portion 36, the brace 32 being employed in connection with the plate 24 to support the rail 21 at a curve, it being readily seen that the plate 24 is mounted on the tie 18 in the same manner as the plate 11 is mounted on the tie, the brace 32 being then supported on the plate 24 with the flange 30 of the brace extending across

the cut away portion 29 of the plate 24. When the brace 32 is thus mounted, the forward upwardly inclined edge 34 of the brace will project over the base 22 of the rail and aline with the rib 25 of the plate 24, and the head 35 formed with the plate 33 will engage the web 37 of the rail with the usual head 38 of the rail reposing in the cut away portion 36 of the head 35.

It will be readily understood that the chair disclosed in Figs. 1 to 4 inclusive is preferably used in connection with straight rails to support the same upon the tie, whereas the chair disclosed in Figs. 6 and 7 and the brace therefor, said brace being disclosed in Figs. 5 and 7, are preferably employed to support a curved rail, it being further seen that the two forms of chairs described can be arranged alternately upon the ties or placed in the same positions thereon, the particular disposal of the chairs upon the ties being dependable upon the curvature of the rail and the solidity of the ground or bed upon which the ties are placed. It will thus be apparent that in places where the bed of the track is not as solid as is necessary in order to properly place the rails and ties thereon, and at places where the rails curve, the chair disclosed in Fig. 6 and the brace disclosed in Fig. 5 are used, whereas in all portions of the bed where the material thereof is solid, the chair disclosed in Fig. 1 is preferably employed, this being the simplest form of the invention.

In Figs. 8, 9 and 10 I disclose another modification of my device and in which the plate and brace are formed integrally instead of in separate pieces as shown in Figs. 5 and 6. In the new construction use is made of a plate 39 having obliquely extending flanges 40 formed integrally therewith and projecting downwardly from the ends thereof, the said flanges terminating in integral lips 41, of a shape and construction similar to the flanges disclosed in Figs. 1 and 5 and at approximately the medial longitudinal portion of the plate 39 there is formed integrally therewith an upwardly bent or curved longitudinally extending rib 42 terminating in an integral, longitudinally formed head 43, the said head 43 being somewhat similar in shape to the head 36 disclosed in Fig. 5 but of greater length and appears somewhat similar to the usual fish plate generally used in securing rail ends, the structure disclosed in Figs. 8, 9 and 10 being adapted for the same purpose.

Now in order to secure the rail 21 upon the tie 18 as shown in Fig. 9, or to secure the rail 21 upon the tie 18 and also connect the same with an adjacent rail 44 on a tie 45, a plurality of the rail chairs disclosed in Fig. 8 is placed upon the ties 18 and 45 as shown in Fig. 9, and are spaced

apart to receive therebetween the ends of the rails 21, 44, with the bases of the rails reposing upon projecting portions 46 of the plates 39, the mentioned plates being adapted to repose on both of the ties 18 and 45 with the flange 40 at one end of each plate extending downwardly over the tie 18 and the flange 40 at the other end of each plate extending downwardly over the tie 45, suitable spikes being passed through openings provided in the plates and the flanges to secure the same upon the ties. It will now be seen that the ribs 42 will engage the bases of the rails and the heads 43 will engage the heads of the rails, suitable bolts 47 being then arranged to pass through the adjacent chairs as shown in Figs. 9 and 10 and through the webs of the rails to rigidly secure the rails 21 and 44 between the rail chairs and upon the ties 18 and 45.

It will be understood that the rail chair disclosed in Fig. 8 can be employed in the same manner as the rail chairs shown in Figs. 2 and 3, the rail chair disclosed in Fig. 8 being simply adapted to extend over two ties, whereas in Figs. 2 and 3 one rail chair is employed for each tie. It will be further seen that the rail chair disclosed in Figs. 8, 9 and 10 is formed or cast of a single piece of material, whereas in the constructions disclosed in Figs. 5, 6 and 7, the rail chair consists of two parts, one part constituting a brace and the other part a base for supporting the brace.

Having thus described my invention, I claim:

1. In a rail chair, the combination with a plate, of upper and lower ribs thereon, a curved rib on the plate, a flange extending obliquely from the plate, an auxiliary rib forming a continuation of the said curved rib and extending across the upper face of the said flange, and a lip formed on the free end of the said obliquely extending flange.

2. In a rail chair, the combination with a plate, of a rib thereon, a curved rib on the said plate and spaced from the first mentioned rib, a flange extending obliquely from one edge of the plate, and an auxiliary rib extending across the upper face of the said flange and forming a continuation of the said curved rib.

3. In a rail chair, the combination with a plate, of a rib thereon, a curved rib on the said plate and spaced from the first mentioned rib, a flange extending obliquely from an edge of the plate, a brace adapted to be supported on the said plate, and a head forming a part of the said brace and adapted to engage a rail to securely support the same on the said plate.

4. In a rail chair, the combination with a plate, of a rib thereon, a curved rib on the said plate and spaced from the first mentioned rib, a flange extending obliquely

from an edge of the plate, a brace adapted to be supported on the said plate, a head forming a part of the said brace and adapted to engage a rail to securely support the same on the said plate, and a flange forming a part of the said brace and extending obliquely therefrom to project downwardly beyond an edge of the plate.

5. In a rail chair, the combination with a plate, of a rib formed therewith and projecting upwardly at an incline therefrom, a

head formed integrally with the said rib, flanges extending obliquely from edges of the said plate and formed integrally with the plate, and lips integrally formed on the lower ends of the said flanges.

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

FREDERICK C. BAUER.

Witnesses:

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GEORGE H. BRIGGS.