

(No Model.)

S. HARRIS.
RAILWAY CHAIR.

No. 478,428.

Patented July 5, 1892.

Fig. 1.

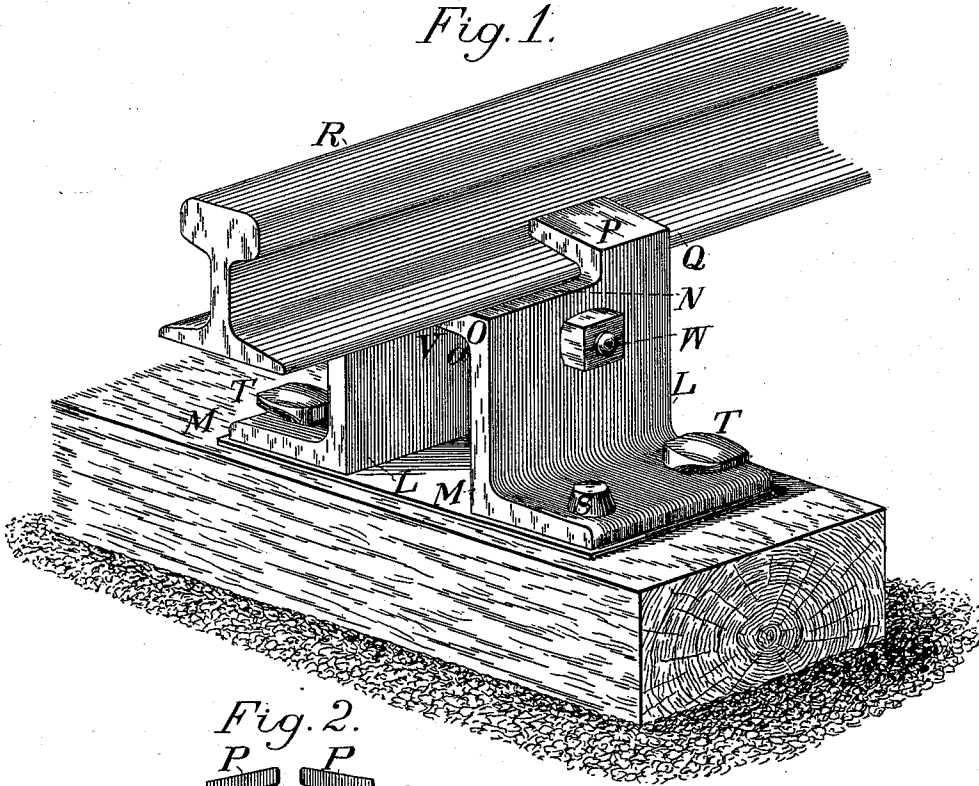


Fig. 2.

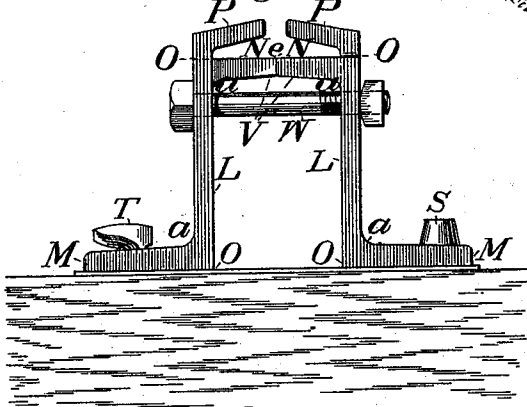


Fig. 3.

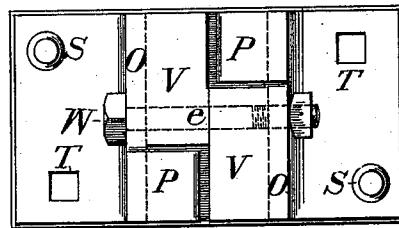
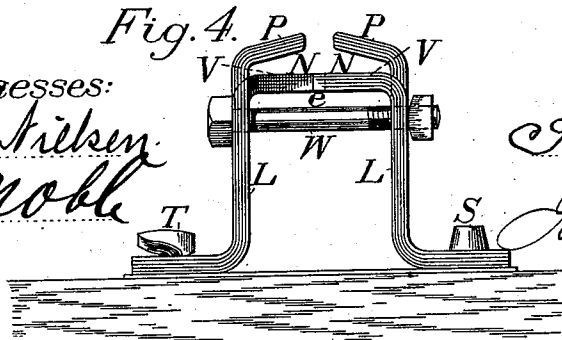


Fig. 4.



Witnesses:

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UNITED STATES PATENT OFFICE.

SILAS HARRIS, OF SAN FRANCISCO, CALIFORNIA, ASSIGNOR TO THE PACIFIC ROLLING MILLS COMPANY, OF SAME PLACE.

RAILWAY-CHAIR.

SPECIFICATION forming part of Letters Patent No. 478,428, dated July 5, 1892.

Application filed October 16, 1891. Serial No. 408,923. (No model.)

To all whom it may concern:

Be it known that I, SILAS HARRIS, a citizen of the United States, residing in the city and county of San Francisco, State of California, have invented certain useful Improvements in Railway-Chairs; and I hereby declare the following specification, with the drawings accompanying and forming a part of the same, to be a full and exact description of my invention.

My invention relates to what are technically known as "railway-chairs" employed to support railway-bars and fasten the same to sleepers or ties; and it consists in the construction, arrangement, and combination of parts, substantially as will be hereinafter described and claimed.

Referring to the drawings, Figure 1 is a perspective elevation of one of my improved railway-chairs mounted on a sleeper or tie and with the rail in place. Fig. 2 is an end view of the same chair, showing its transverse section. Fig. 3 is a plan view of the chair. Fig. 4 is an end view of a similar chair made from a bar of uniform section by bending to illustrate the difference from my methods as shown in Figs. 1, 2, and 3.

Similar letters of reference indicate corresponding parts.

The chair shown in Figs. 1, 2, and 3 is composed of two similar sections cut transversely from rolled bars, commonly called "Z-bars," and not by bending pieces of uniform section, as shown in Fig. 4. The web or vertical part L of the bar, the bottom flanges M, and top flanges N are nearly uniform in section, but may be varied at pleasure in preparing the original bars from which the pieces are cut.

The corners at O are made acute on their outer angle, so the bearing area at both the top and bottom extends to the extreme of the vertical part L, and the inner corners are filleted and rounded, as at a. This reinforces the corners by increasing the section at that part and adds greatly to the strength and stability of the chair as a whole, or, in other words, distributes the metal in a manner to meet the strains.

In Fig. 4, for example, the functions and general shape of the chair are the same; but

the section has to be made large enough to give the required strength at the corners, and this exceeds what is required in the vertical and horizontal members.

To support and fasten the rail, I slit the top flanges N, turning up clips P, which are made to fit closely over the flange Q of the rail R. These flanges P are not bent in mounting the rail, which is inserted or removed in the following manner: Two of the holding-down spikes S are driven through round holes, so that by removing or leaving out all the spikes but one of the cylindrical ones S the chair-section can be swung into a diagonal position, and after the rail R is placed on top the chair is set back into alignment with the rail and the clips P nipping the flanges M of the rail R without bending and without the danger of fracture common in such cases. The holding-down spikes T are of the usual form, square in section, as indicated in Fig. 3. The horizontal part V of top flange N is preferably made wider than the portion P; but this can be varied at pleasure and as requirements demand.

To join the members forming the chair, I employ a through-bolt W, which can be screwed up firmly, the flanges V abutting at e to receive the strains and the parts so proportioned that the clips P will at the same time freely embrace the rail R.

Having thus explained the nature and objects of my invention, also the manner of constructing the same, what I claim as new, and desire to secure by Letters Patent, is—

1. In a railway-chair, the combination of the two similar sections cut transversely from Z-bars, said sections having the top flanges N, which are slitted to permit the turning up of clips P, which fit closely over the base-flange of the rail, and the securing-bolt W, substantially as described.

2. A railway-chair, as described, consisting of two duplicate members joined by a bolt W and provided with one or more cylindrical holes in the bottom flanges, so the chair can as a whole be swung to a diagonal position and the rail thus inserted or removed, substantially as described, and for the purposes specified.

3. In a railway-chair, the combination of the two similar sections cut transversely from Z-bars, said sections having the vertical part L, bottom flange M, and top flange N, and with
5 the corners at O made acute and the inner corners filleted and rounded at *a* for the purpose of reinforcing the section, said top flanges N being slitted to provide the clips P, which
10 are made to fit closely over the base-flange of the rail, the inner edges of said flanges N being

in contact with each other, and the through-bolt W, which joins the two sections together, and with the holding-spikes S and teeth arranged substantially as described.

In testimony whereof I have hereunto affixed
my signature in the presence of two witnesses. 15
SILAS HARRIS.

Witnesses:

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