(No Model.)

H. H. LITTELL.

RAIL FOR STREET RAILWAYS.

No. 390,979. Patented Oct. 9, 1888.

Fig. 1.

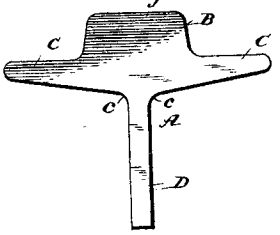


Fig. 2.

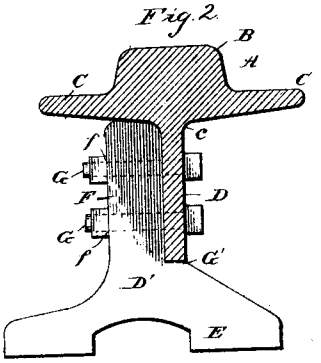


Fig. 3

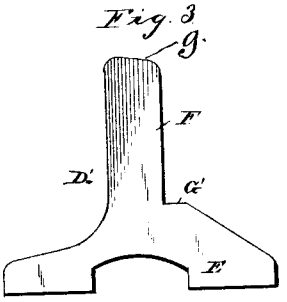


Fig. 4.

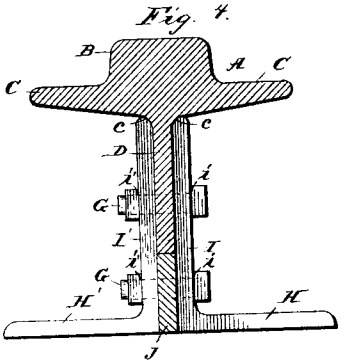
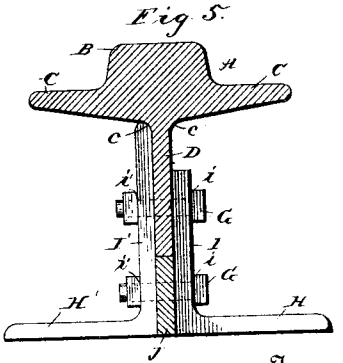


Fig. 5.



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UNITED STATES PATENT OFFICE.

HARDIN H. LITTELL, OF LOUISVILLE, KENTUCKY.

RAIL FOR STREET-RAILWAYS.

SPECIFICATION forming part of Letters Patent No. 390,979, dated October 9, 1888.

Application filed October 13, 1887. Serial No. 252,229. (No model.)

To all whom it may concern:

Be it known that I, HARDIN H. LITTELL, a citizen of the United States, residing at Louisville, in the county of Jefferson and State of Kentucky, have invented certain new and useful Improvements in Rails for Street-Railways, of which the following is so full, clear, and exact a description as will enable others skilled in the art to which my invention appertains to make and use the same, reference being had to the accompanying drawings, in which—

Figure 1 is an end view of my improved rail. Fig. 2 is a cross-section of the same with its supporting-chair. Fig. 3 is a detail representation of the chair. Fig. 4 is a cross-section with another form of chair or support for the rail. Fig. 5 is a similar view showing a slight modification in the form of support or chair shown in Fig. 4.

Like letters of reference designate like parts in the several figures.

The object of my invention is to construct a rail for street-railways in which the strain will invariably be transmitted to the center of the girder or shank, no matter to what extent the car vibrates.

Referring to the drawings, A represents my improved rail having the head or top B, upon which the tread of the wheel travels. At the lower extremity of this top B, and extending out at either side therefrom, are flanges C C, and formed integral with these flanges C C is the girder or shank D, which extends downwardly therefrom, as shown. On the under side of the head B are formed, by the junction of the flange C C and shank D, shoulders *c c*, for a purpose presently explained. It will be observed that this girder or shank is situated directly in a line with the center of the head of the rail, so that, obviously, no matter to what extent the car vibrates the strain will fall directly in the center of the said girder or shank, the advantages of which will be readily understood and appreciated by those familiar with this class of devices. This rail A is supported and upheld by means of a chair, various forms of which chair are shown in the drawings, any one or all of which may be adopted, if desired, without departing from the general spirit of my invention.

Referring to Figs. 2 and 3, the chair is designated by the letter D′, and is formed with a base-piece, E, and the upwardly-extending flange F, which flange is perforated at *f f* for the reception of bolts or rivets G, by means of which the shank or girder of the rail is secured to the chair, the said girder or shank being also formed with perforations corresponding in number and position to those of the flange F, as clearly shown in the drawings. The lower extremity of the girder or shank D rests upon a step, G′, situated at the lower extremity of the flange F, and at one side thereof, and one of the flanges C of the rail rests upon the upper extremity of the said flange F, having a rounded portion, *g*, which conforms to the shape of the shoulders *c c* and forms a tight joint therewith, so that, obviously, the rail is supported in such a manner that accidental displacement will be an impossibility.

Referring now to Fig. 4, which shows a different form of chair or support, the base of the said chair is designated by the letters H and H′, which are formed with the upwardly-extending flanges I and I′, respectively. These flanges I and I′ are formed at suitable points with perforations *i* and *i′* to receive bolts or rivets G, which bolts or rivets also extend through perforations formed in the shank D of the rail and in the sleeper J. When this form of chair is adopted, the rail is supported by having the lower extremity of the shank D rest upon a sleeper, J, situated between the flanges I and I′, and extending up a suitable distance, and the upper extremities of the flanges I I′ are situated in the recesses *c c*, formed by the junction of the flanges C C and the shank D.

In Fig. 5 one of the flanges of the chair, as I, extends only part way the length of the shank D. Obviously, when this form is adopted the removal and replacing of the rail will be greatly facilitated.

From the foregoing it will be readily seen that the above rail may be readily and easily removed from the chair without disturbing any appreciable amount of road-bed and with-

out disturbing the chair, as, obviously, the rail is removed by removing the bolts from the perforations of the chair and shank.

Having now described the uses, objects, and advantages of my invention, what I believe to be new, and desire to secure by Letters Patent, and what I therefore claim, is—

In a track for street-railways, the combination, with the rail having a head and outwardly-extending flanges, and provided with a girder at the center of the head, and shoulders formed at the junction of the flanges and shank, of a chair formed of a single piece and provided with a base having a step or seat and a flange having a rounded upper end conforming to the shape of the shoulder, substantially as specified.

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

HARDIN H. LITTELL.

Witnesses:
J. M. PETTUS,
J. W. MITCHELL.