

(No Model.)

H. A. IDDINGS.
RAILWAY CHAIR.

No. 495,340.

Patented Apr. 11, 1893.

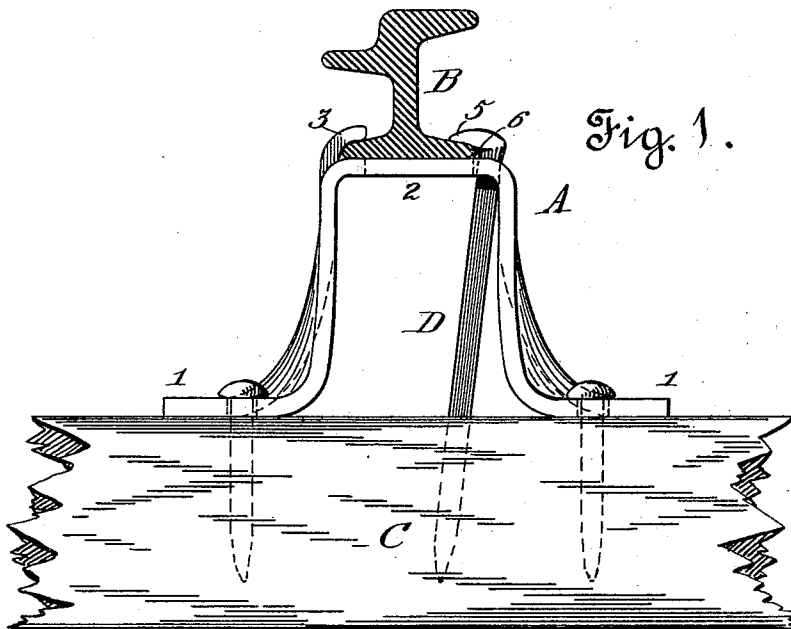


Fig. 1.

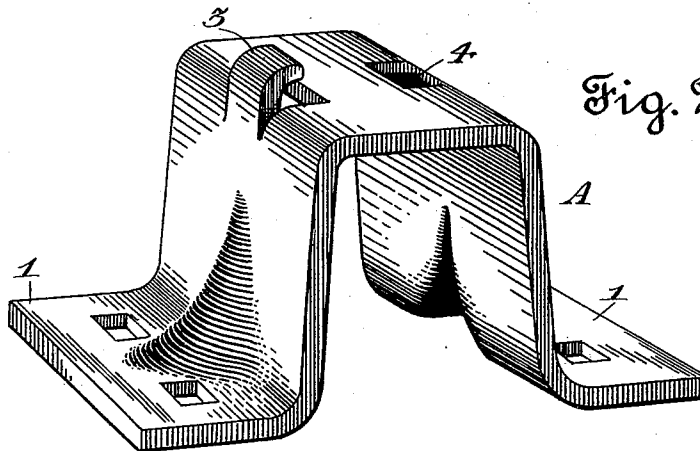


Fig. 2.

Witnesses.

H. J. Outeverde
E. J. Madden

Inventor.

Henry A. Iddings
by *Spears & Leely*
Attorneys

UNITED STATES PATENT OFFICE.

HENRY A. IDDINGS, OF SAN FRANCISCO, CALIFORNIA.

RAILWAY-CHAIR.

SPECIFICATION forming part of Letters Patent No. 495,340, dated April 11, 1893.

Application filed April 25, 1892. Serial No. 430,504. (No model.)

To all whom it may concern:

Be it known that I, HENRY A. IDDINGS, a citizen of the United States, residing at San Francisco, in the county of San Francisco and State of California, have invented certain new and useful Improvements in Railway-Chairs; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention relates to improvements in railway chairs of the class used principally in street railways, and upon paved streets where the character of the paving is such that the wooden ties or stringers must be set so low, that rails spiked directly to such ties would be below the paving level. One type of chairs for this purpose is a rectangular frame having projecting base flanges by which it is spiked to the tie, and a plane flat top upon which the base of the rail rests; projecting above the top, and situated at diagonally opposite corners are two hooked lugs, formed integrally with the body of the chair. These lugs are sufficiently far apart to admit the base of the rail at an angle, but when the chair is turned in line with the rail, the lugs catch over the base on both sides and thus lock it, no other fastening being provided. An objection to this form of chair is that it is impossible to take up a rail without pulling all the spikes from all the chairs beneath that particular rail and turning every chair into perfect oblique alignment. As each chair is usually secured by four spikes, and as it is difficult to get the correct alignment, it will be seen, that removing and replacing a rail is a matter requiring a large amount of time and trouble.

Another type of chair consists of the rectangular frame having projecting base flanges, and a plane flat top through the outer edges of which are rectangular openings, large enough to admit U-shaped lugs or hooks, which after being passed half through these openings are turned partly around, so that one arm of the U may pass over the base flange of the rail and the other below the lower side of the top of the chair, in which position it is fastened by means of a wedge driven vertically through the unfilled portion of the opening. In this form of chair, if all rails were absolutely of one size, then U-shaped hooks

or lugs might be made of such size and shape that they would always clamp and hold the rail tight but in many instances there is a variation in the width and thickness of the flanges of the rail, caused by wear of the rolls by which they are made; and this variation causes a laxity in the clamping on all the more slender rails if the lugs are made large enough to fit the extreme heavy sizes of rails. Vice versa, if the lugs are fitted for the slender rails, it is impossible to turn them around so as to clamp the thicker or wider ones.

Another objection to the chairs using the U-shaped lugs is that it is impossible to change the rail without removing all the chairs from the ties, as the opening under the chair is too small to allow the wedges to be driven upward with a hammer except in a very slow manner.

My improvements upon the styles of chairs above described are intended to obviate all the defects above set forth. That is, to provide a perfectly rigid connection between the rail and the chair, to permit a rail to be taken up by pulling a single spike at each chair and to make a perfect fastening, without regard to variations in the width or thickness of the base of the rail.

My invention is illustrated in the accompanying drawings in which—Figure 1, is an end elevation of one of my chairs showing the rail in cross-section, the chair being secured to a cross tie. Fig. 2, is a perspective view of the chair.

The chair A, consists of a rectangular open frame having base flanges 1, 1, and rolled or forged from steel or iron. Projecting upwardly from the middle of one side of the flat upper face 2, is a hooked lug 3, which engages with one edge of the base of the rail B. Opposite the lug 3, is a hole 4, formed in the flat top, the latter being the seat for the base of the rail. One of these chairs supporting a rail is spiked rigidly near one end of the tie C, a chair is then placed near the opposite end of the tie, supporting a rail, one side of the base flange being held by the hooked lug 3; and the gage of the track is effected by the driving of a long heavy spike D in a slightly oblique direction, through the hole 4, and into the tie C, until the lip 5, of the head of the

spike, bears down upon the flange of the rail base and wedges the rail closely up against and under the lug 3. The head of the spike is beveled as at 6, to allow of the convenient use of the claw bar in extracting the spike. The chair is then firmly secured by the spikes through its base flange. It will be evident that the rail wedged as it is by the long spike will be much more firmly held than by the diagonally placed lugs before referred to, or by the removable U-shaped clamp. At the same time the extra spike gives an additional fastening between the chairs and the ties. Track may also be laid much more rapidly because the long spike is much quicker driven placing the rails in gage, than by the other methods. It will also be noted that in using my chairs the variation in the rail may be considerable, and the chair and rail still be firmly held together, as the spike is made slightly enlarged just under the head; when it is driven to place, if the rail is slightly wide, it will force its way through the edge of the flange, thus clamping either a wide or narrow flanged rail, when the head has reached the flange.

In removing a rail, instead of having to take all the spikes from all the chairs under such rail, to turn all the chairs to oblique position and then take out the rail, or in the other form, to drive out the wedges in a very slow and difficult manner, it is only necessary to remove the long spike from each chair and take out the rail, while the chairs themselves remain firmly secured to the spikes through their base flanges.

What I claim is--

In combination with a tie or stringer, a chair having a horizontal upper surface, a lug projecting above the surface on one edge to engage the flange of the rail and made integral with the chair, an opening in the opposite edge and a removable spike adapted thereto, substantially as described.

In testimony whereof I have affixed my signature, in presence of two witnesses, this 11th day of February, 1892.

HENRY A. IDDINGS.

Witnesses:

L. W. SEELY,
JOHN COFFEE.