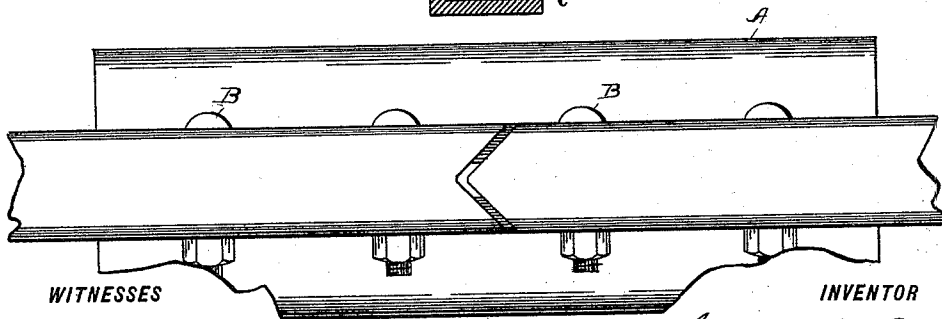
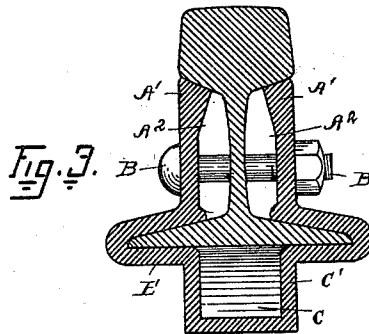
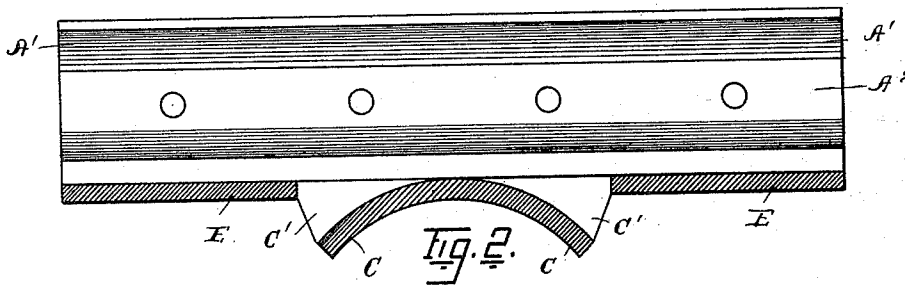
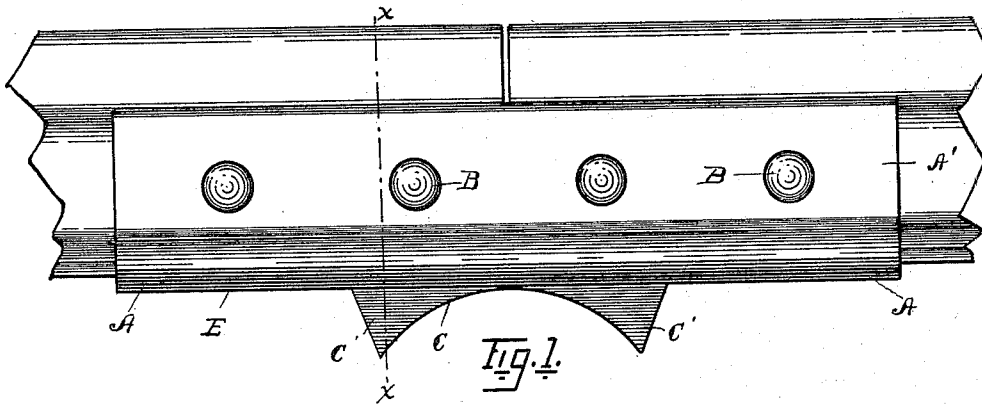


(No Model.)

G. J. PAEHTZ.
RAILWAY CONSTRUCTION.

No. 585,330.

Patented June 29, 1897.



WITNESSES

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Fig. 4.

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GUSTAVUS J. PAEHTZ, OF SAN FRANCISCO, CALIFORNIA.

RAILWAY CONSTRUCTION.

SPECIFICATION forming part of Letters Patent No. 585,330, dated June 29, 1897.

Application filed March 24, 1897. Serial No. 629,096. (No model.)

To all whom it may concern:

Be it known that I, GUSTAVUS J. PAEHTZ, 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 Constructions; and I do hereby declare the following to be a full, clear, and exact description of said invention, such as will enable others skilled in the art to which it most nearly appertains to make, use, and practice the same.

This invention relates to improvements in railway constructions, and has for its objects to render the joint between the rails stiff and rigid, while at the same time simplifying the construction.

In the drawings, Figure 1 is a side elevation of two ends of rails joined by a construction made in accordance with this invention. Fig. 2 is a longitudinal section of the angle-plate. Fig. 3 is a cross-section on line X X in Fig. 1. Fig. 4 is a plan of alternative construction of rails.

Heretofore many constructions have been devised to accomplish the purposes above set forth which have been more or less successful in their attainments. They have not, however, been fully satisfactory. This present construction it is deemed has overcome the objections found in the former constructions.

As shown in the drawings, the joint or angle-plate A forms a continuous integral structure from the under face of the tread of the rail on the one side round and under the rail to the tread on the other side. The vertical extensions of this angle A' A' are formed with hollow faces A² A² next to the web of the rail, and also to take up the wear which occurs at this point. The part of the construction which enfolds the flange of the rail from the base of the web thereof on the one side to that of the other is continuous and so constructed as to fit the parts snugly when the bolts B are drawn firmly together. This continuous construction about the flange of the rail adds great strength to the construction, as it materially augments the resistance to the vertical strains on the part of the vertical sections A' A'. Also by this construction the ties may be clustered closer to the line of separation of the rail-sections.

At the point of separation of the rails is the point of greatest tendency on the part of the rails to be deflected and in consequence wear to take place. It is to strengthen this part of the construction that I have forced down out of the metal itself the arch C. The crown of this arch is intended to rest directly beneath the separation of the rails or as near thereto as is practicable. The ends of the arch are thrown down and inward and are opened to permit of a passage of any foreign substance which may lodge between the ends of the rail. In this construction the metal C', which is struck down from the metal of the plate of the construction, forms a vertical resistance or walls, which prevent the displacement of the arch C by the vertical strains.

In constructing rails in which this invention is embodied the rail is placed within the joint construction by sliding the same over the rail behind the end thereof. The vertical sections are slightly flared at the outer angle of the plate E, being slightly spread to accomplish this. The succeeding rail is butted into position, and when in line with the preceding rail the joint construction is forced forward to inclose the ends of both the rails until the point of separation or ends thereof rest directly over the arch C. The whole construction is bound together by suitable bolts B, which are drawn tightly, so as to compress the vertical extensions A' of the joint construction against the web of the rail and to close the part thereof which enfolds the flange of the rails snugly against the flange. In this position the whole construction is secured to the ties of the road-bed in the usual manner.

In Fig. 4 I have shown an alternative construction wherein the ends of the rail are dovetailed so as to interlap. This construction offers certain advantages in the fact that the passage of the wheels from one rail to the other is not perceived to such an extent as in the square ends of the butted rails, for the reason that the tread of the wheel before passing from one rail has taken a bearing upon the succeeding rail.

It will be observed by reference to the drawings that the vertical extensions A' are so constructed as to extend to near the outward edges of the tread of the rail and to bear

against the same. By means of this the mashing of the tread of the rail by the flange of the wheel is to a great extent overcome.

It has sometimes proved necessary to adjust this joint construction to the web of the rail by insertions of sheet or plate metal between the rail and the vertical extensions A'.

Having thus described this invention, what is claimed is—

10 1. In a joint construction, a bottom plate to rest under the ends of meeting rails to form a bearing between the ties of the road-bed and provided with a stamped construction in the form of an arch under the point of separation
15 of the rails above, substantially as described.

2. In a railway construction, a joint con-

struction therefor, formed in one continuous piece to extend from the under side of the tread of the rail on the one side around and under the rail to the tread thereof on the other side, and provided in the extension under the rail with a stamped construction set down from the metal of the said extension in the form of an arch under the point of separation, substantially as described.

In testimony whereof I have hereunto set my hand this 18th day of March, 1897.

GUSTAVUS J. PAEHTZ.

Witnesses:

BALDWIN VALE,
NORMAN MCKELLAR.