

H. E. JONES.
Street-Railway.

No. 215,003.

Patented May 6, 1879.

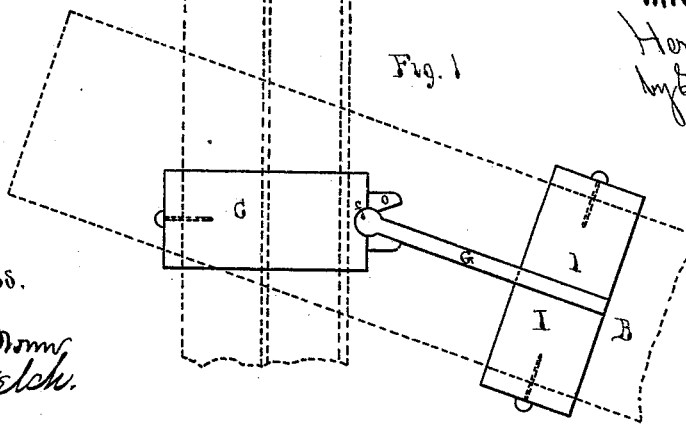
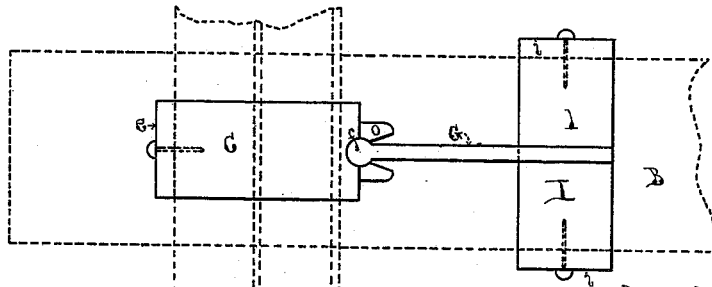
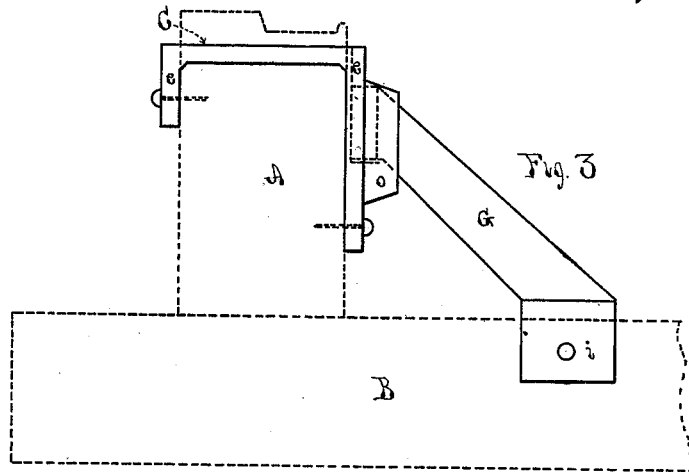


Fig. 1

Fig. 2

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Witnesses.

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HERBERT E. JONES, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN STREET-RAILWAYS.

Specification forming part of Letters Patent No. **215,003**, dated May 6, 1879; application filed March 17, 1879.

To all whom it may concern:

Be it known that I, HERBERT E. JONES, of the city of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and useful Improvement in Street-Railways, of which the following is a specification.

The invention relates to street-railways constructed by laying upon cross-ties stringers braced to prevent spreading, on which the rail is fastened.

In the ordinary method of constructing such railways, the cross-ties must extend beneath the stringers outward far enough to allow knee or angle blocks or braces to be placed outside of the stringers upon the ties, to prevent the spreading of the stringers and the rails thereon by the weight of the cars which pass over them. Similar angle-blocks are placed inside the stringers, to prevent the stringer and rails from being deflected inward by the pressure of the pavement or any accidental forces which may come in contact with them. When laying a track in this manner a considerably greater breadth of ground than the mere width of the track must be broken, to accommodate the ends of the ties extending outside the stringers. This, especially in paved streets, causes considerable expense and trouble, while the length of the cross-ties required to extend beyond and outside the stringers adds to their cost and weight.

The object of my invention is to provide a means of retaining the stringers and rails in position without the use of the outside angle blocks or braces, and to do away with the necessity of having ties which shall extend outside the stringers, which require so great a width of ground to be broken to put them in position.

My invention consists in constructing a cap or saddle, which is combined with a tie or brace placed between the stringers, and which is fastened to the cross-tie in such a manner as to retain the cap or saddle in place and prevent deflection of the stringer on which the cap or saddle rests, while permitting the stringer to adjust itself perpendicularly to the cross-tie, at the same time preventing all lateral or rolling motion of the stringer.

In the drawings, in which similar letters of

reference indicate like parts, Figure 1 is a plan view of a railway embodying my invention. Fig. 2 is a plan view of my device. Fig. 3 is a side view of the same.

A is the stringer, upon which the rail is laid; B, the cross-tie, on which the stringer is placed. C is the saddle or cap, having the lips *e e* formed upon it to inclose or lap over the stringer. G is the tie-brace, connected with the saddle by the adjustable joint *f*. This tie-brace has a foot, I, which has lips *i*, which overlap the tie and are spiked to the side of it.

The joint *f* is formed in the lip *e* and lugs *o* by making a perpendicular bore having a side opening of lesser diameter to admit the end of the brace G, on which is formed a cylinder which fits the bore of the lug and lip.

This arrangement of parts permits the saddle to be depressed or elevated, to accommodate itself to sleepers which have a different height, or which become compressed by use, and sufficiently protects the brace from the jar of passing cars to prevent its breaking, while at the same time no movement in a lateral direction to the line of track is possible.

The lips *i i* on the foot I overhang the cross-tie, and are spiked to the sides of it horizontally, which construction effectually resists any tendency the stringer A might have by rolling outward to pull the spikes, as might be the case if the foot I were only spiked down to the top of the cross-tie B.

As the lips *e e* overhanging the stringer will not permit the stringer to move in a lateral direction to the line of track without moving with it the saddle C, bar G, and foot I, it will be seen that those spikes so driven always will substantially and firmly hold the stringer in its proper position, permitting neither a spreading nor narrowing of the track.

By this construction I am enabled to make a railway with much less outlay in tearing up and replacing pavements, as the width of pavement to be removed and replaced is much less than heretofore, as no cross-tie outside the stringer on which to place angle-blocks is needed. The expense is also diminished by the use of cross ties much shorter than those heretofore required.

It will also be observed that by the use of my adjustable joint and connecting parts, as

above described, I am enabled to make them all of cast-iron, and thereby greatly cheapen their construction. This has been impossible with any analogous device without great danger of the parts breaking by the uneven settling of the ties and stringers, or the jar from the loaded cars passing over the track.

What I claim as new and of my invention is—

1. A saddle, C, having lips *c c*, bearing against the opposite sides of the stringer, combined with a tie-brace, G, the foot of which

is fastened to the cross-tie, substantially as described.

2. A saddle or cap, C, combined with a tie-brace, G, which is fastened to the sides of the cross-tie, substantially as described.

3. A saddle or cap, C, combined with the tie-brace G by an adjustable joint, substantially as described.

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Witnesses:

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