

(No Model.)

2 Sheets—Sheet 1.

L. HAAS.

COMBINED RAILWAY JOINT AND CHAIR.

No. 307,296.

Patented Oct. 28, 1884.

Fig 1

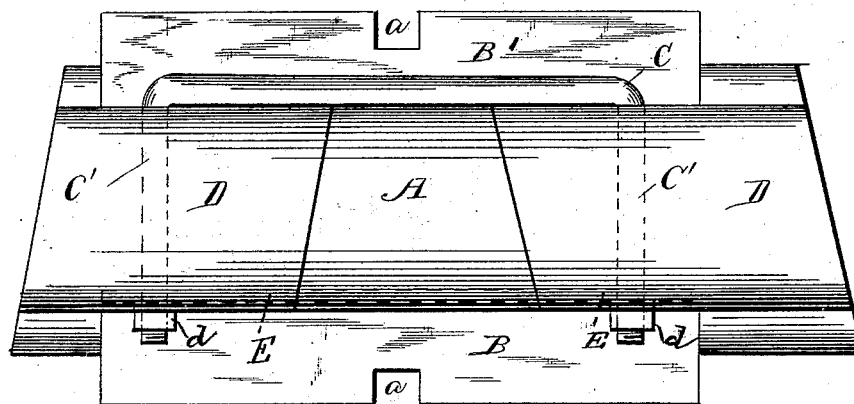


Fig 2

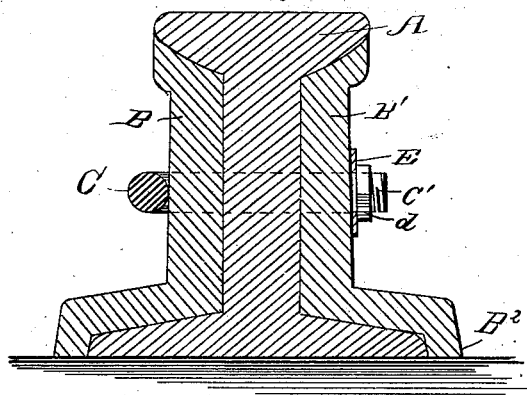
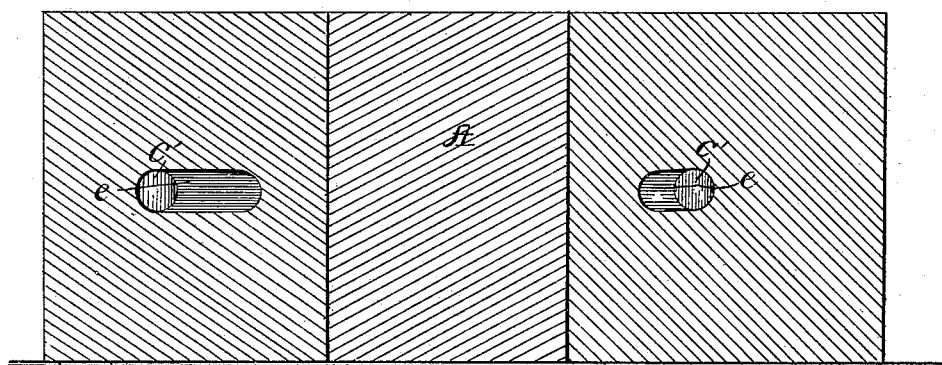


Fig 3



WITNESSES:

W. E. Bowen.  
V. M. Rhein.

INVENTOR

Levi Haas  
BY *Myers & Co*  
ATTORNEYS.

(No Model.)

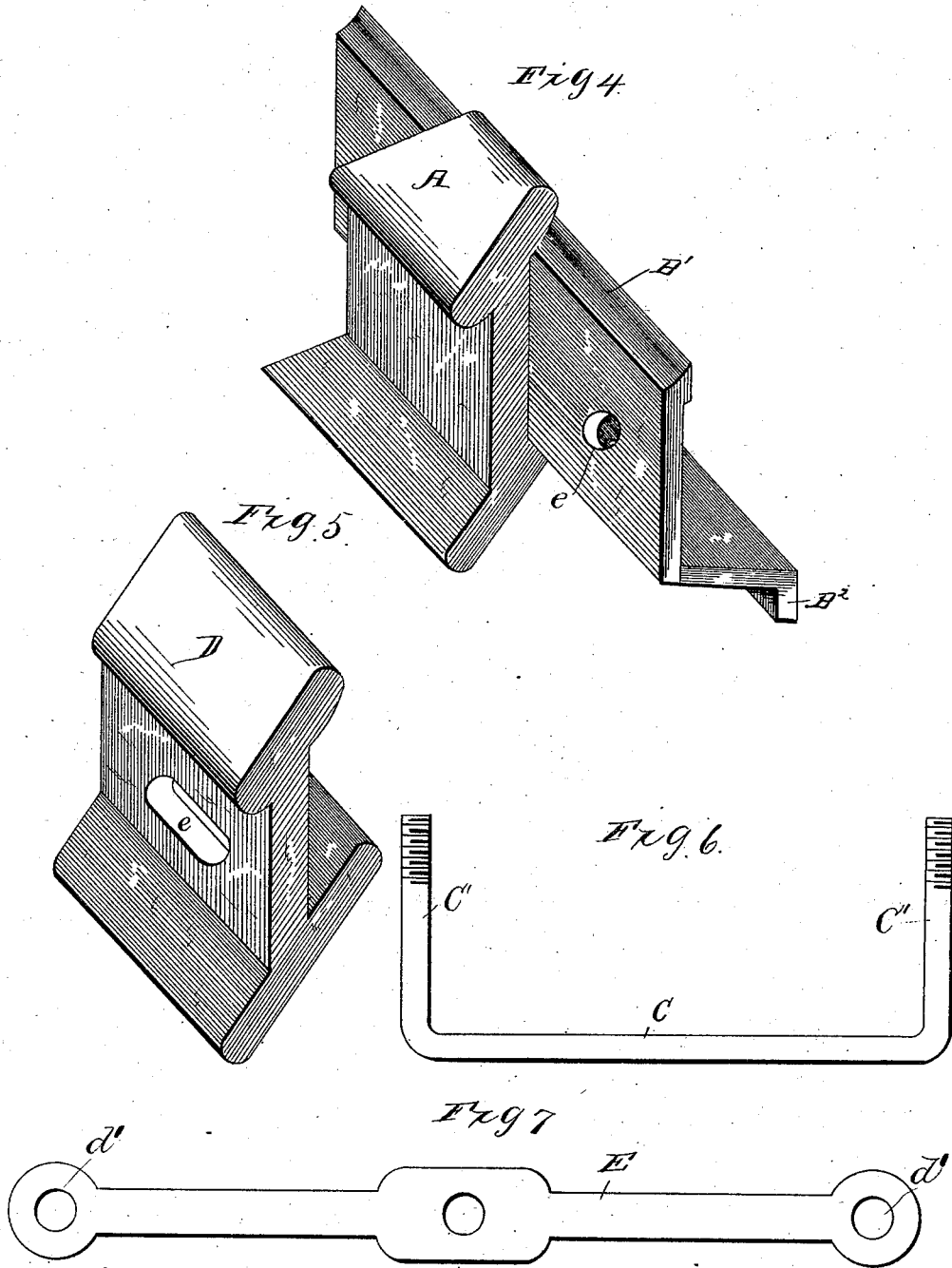
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# UNITED STATES PATENT OFFICE.

LEVI HAAS, OF CHESTER, PENNSYLVANIA.

## COMBINED RAILWAY JOINT AND CHAIR.

SPECIFICATION forming part of Letters Patent No. 307,296, dated October 28, 1884.

Application filed March 6, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, LEVI HAAS, a citizen of the United States of America, residing at Chester, in the county of Delaware and State of Pennsylvania, have invented certain new and useful Improvements in Combined Railway Joint and Chair, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention pertains to improvements in combined railroad joints and chairs; and it consists in the peculiar construction, combination, and arrangement of the parts, substantially as hereinafter more fully set forth, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a plan view of my improvement. Fig. 2 is a cross-section through splicing rail-section. Fig. 3 is a central vertical longitudinal section of the same, and Figs. 4, 5, 6, and 7 are detail views.

In the construction of my combined railway joint and chair I employ an approximately V-shaped splicing rail-section, A, (see Fig. 4,) which I rigidly bolt to or cast integral with the fish-plate B'. I also provide each fish-plate with a recess, *a*, for admission of a spike of corresponding size for spiking each coincident fish-plate to the sleepers, the fish-plates being thus recessed at a point intermediate of their length, and thus secured by spikes to prevent both longitudinal and lateral movement thereof. The fish-plates B and B' are connected together and to the rails D D by a staple-shaped bolt, C, with its end portions C' passing through the same, and the webs of the rails are spliced together by the rail-section A, and connected by a connecting-bar, E, to which the said bolt is nutted, as at *d d*. The bolt ends pass through elongated openings or slots *e* in the rails D, to allow of contraction and expansion. The fish-plates B and B' project down vertically immediately over the

longitudinal flanges of the rail-sections, as shown at B<sup>2</sup>, in order to inclose and hold the sections rigidly in position.

It will be observed that the splicing rail-section A is held against any possible displacement from strain or jarring by the staple-shaped bolt C, in connection with the plate E, having at either end the bolt-orifices *d' d'*. The permanent connection of the splicing rail section or bar to one fish-plate, B', also keeps the V-shaped splicing rail or bar at all times in line with the abutting rail-sections, and prevents the liability of the breaking of the fish-plates, since any lateral pressure exerted upon one or the other fish-plate is synchronously received also upon the splicing rail or bar, and by it transmitted equally to the abutting rails, whereby the fish-plates will always remain a uniform distance apart, and thus not be acted upon or subjected to pressure in opposite directions, which would be liable to cause the breaking of said plates.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a combined railway joint and chair, the combination of the rail-section A, the fish-plates B and B', having recesses *a* and flanges B<sup>2</sup>, nutted bolt C, and plate E, substantially as shown and described.

2. A combined railway joint and chair consisting of the rail-section A, rigidly secured to or integral with fish-plate B', having recess *a*, fish-plate B, having recess *a*, nutted bolt C, and plate E, having bolt-orifices *d'*, substantially as shown and described.

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

LEVI HAAS.

Witnesses:

P. BRADLEY,  
D. MACKENNEY.