

(No Model.)

McL. W. THOMSON.

RAIL CHAIR.

No. 412,681.

Patented Oct. 8, 1889.

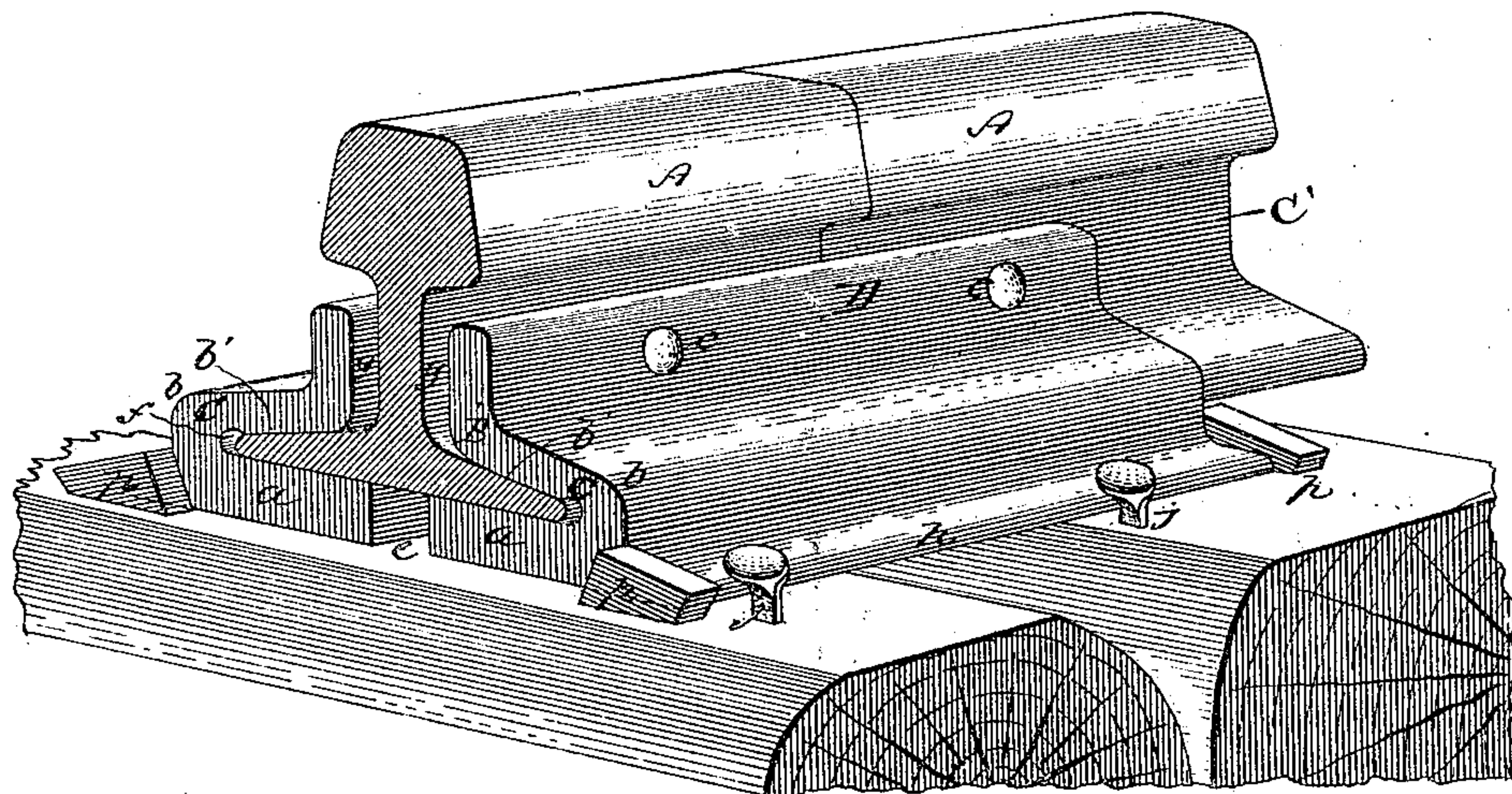
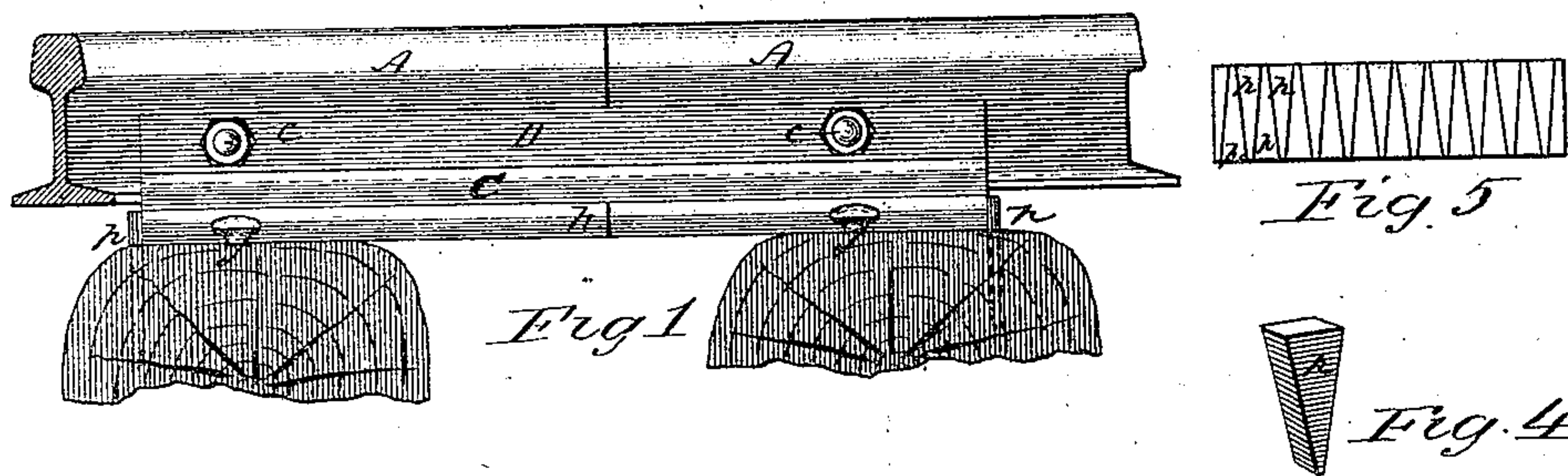
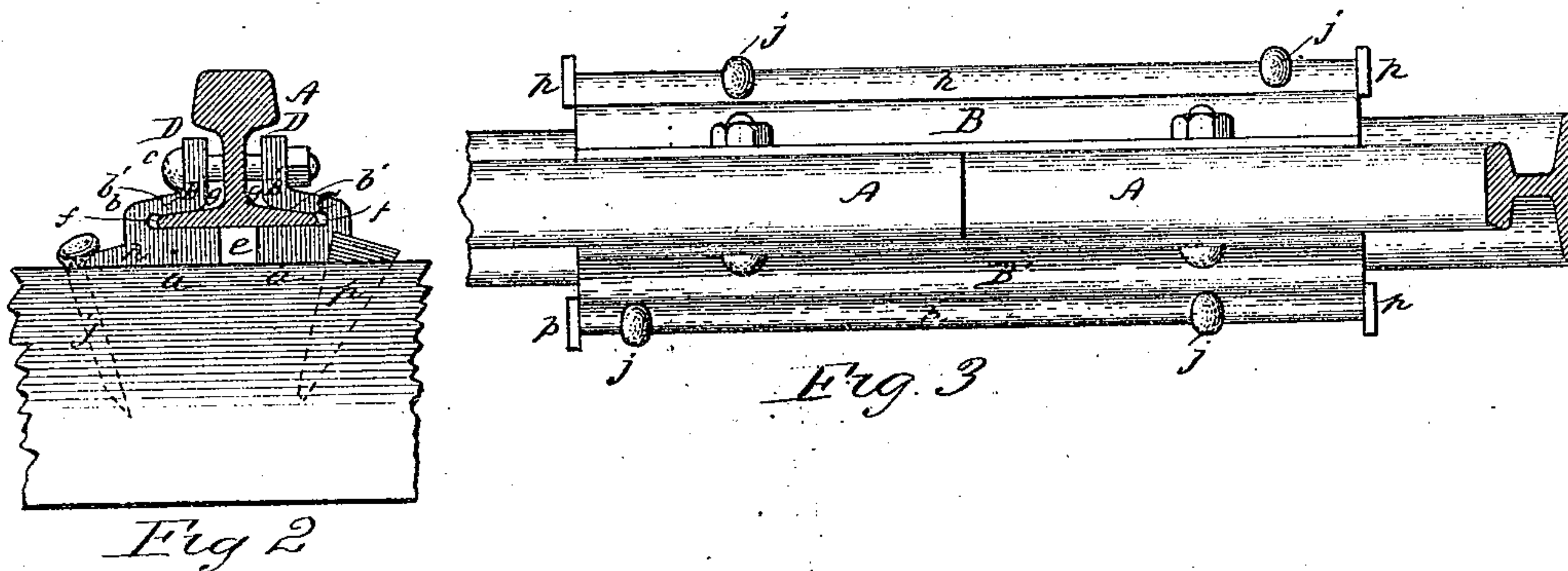


Fig. 6

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WITNESSES.

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UNITED STATES PATENT OFFICE.

MCLEOD W. THOMSON, OF ALTOONA, PENNSYLVANIA.

RAIL-CHAIR.

SPECIFICATION forming part of Letters Patent No. 412,681, dated October 8, 1889.

Application filed March 25, 1889. Serial No. 304,626. (No model.)

To all whom it may concern:

Be it known that I, MCLEOD W. THOMSON, a citizen of the United States, residing at Altoona, in the county of Blair and State of Pennsylvania, have invented certain new and useful Improvements in Chairs for Railroad-Rails; and I do hereby declare the following to be a full, clear, and exact description of the invention, reference being had to the accompanying drawings, which form part of this specification.

My invention has relation to chairs for railroad-rails; and it consists in the novel construction and combination of parts hereinafter described and specifically claimed, special reference being had to the improved method of fastening the chair to the rails and the chair to the ties.

In the accompanying drawings, Figure 1 is a side view, and Fig. 2 a transverse section, of my improved twin chair applied to a rail-joint. Fig. 3 is a top view. Fig. 4 is the stop-spike in perspective. Fig. 5 shows the cutting of the stop-spike from the bar. Fig. 6 is a view in perspective.

A A represent the rails.

B B' represent the two halves or sections of the chair. Each section is formed with a broad horizontal base portion *a*, which, when the chair is fitted to the rail, lie with their inner edges in close proximity to each other, but separated by a space *e* running the whole length of the chair.

The rail or rails A rest upon the horizontal bases *a a*, which constitute seats for the rail, and are designed and adapted to receive and support the entire stress of the rail. A web C is formed at the outer edge of each base and bent inwardly, as indicated at *b*, so as to overlap the foot of the rail, and thence upwardly parallel or approximately parallel with the web C' of the rail, as shown at D. At *b'* the introverted portion of the web C is beveled or shaped on its under surface so as to impinge upon the upper surface of the foot of the rail. At such point alone the web C contacts with the rail. Between the edges of the rail-foot and the inner wall of the cavity formed at *b* by the bending of the web C a space *f* is left, while between the inner surface of the upright extension D and the sur-

face of the rail-web a space *g* is left. The object of the spaces *e f g* is to provide for drawing up the chair members to compensate for wear. The parts B B' are coupled together and to the rails by horizontal bolts *c*, passing through the upright extensions of the webs C' and the rail-webs. The extensions D terminate below the head of the rail, and therefore do not receive any of the vertical stress or strain, the latter being imposed upon and taken entirely by the base-rests *a*.

The chair members B B' are secured to the cross-ties by spikes *j* or screws, which impinge upon the edges and upper surfaces of the flanges *h*, formed on the base portion *a*.

The bolt-holes through the rail and chair are made somewhat larger than the bolts, and those through the vertical portion D of the chair are elongated, the purpose of the enlargement being to allow the rails to expand and contract.

The stop-spikes *p* are cut from the bar, as shown in Fig. 5, with two opposite sides tapering and two opposite sides parallel and driven into the ties, impinging against the ends of the chair, and thus prevent the creeping of the rails in direction of the track. The two tapered sides of the stop-spike wedge against the ends of the fibers of the ties.

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

1. The combination, with the cross-ties and the twin chair-sections B B', of the wedge-shaped headless stop-spike *p*, driven into the tie, wedging against the grain of the wood, and impinging upon the end of the chair, substantially as described.

2. The combination, with the cross-ties and the twin chair-sections B B', of the wedge-shaped stop-spike *p*, driven into the tie, wedging against the grain of the wood, and impinging upon the end of the chair, said chair-sections having the horizontal bases *a a*, with projecting flanges *h*, and the upwardly and inwardly extended webs C, connected together and engaging the rails A A by means of the transverse screw-bolts *c*, passing through the vertical web-extensions D, substantially as described.

3. The combination, with the cross-ties,

rails, and twin chair-sections having flanged
bases *a a*, which embrace the foot of the rail,
of wedge-shaped stop-spikes inserted in the
ties at the ends of the chair-sections at an ob-
lique angle to the face of the tie, substan-
tially as described.

In testimony that I claim the foregoing I

have hereunto set my hand this 12th day of
March, 1889.

MCLEOD W. THOMSON.

Witnesses:

I. R. BINGAMAN,

G. A. HOUSER.