

(No Model.)

McL. W. THOMSON.
CHAIR FOR RAILROAD RAILS.

No. 371,862.

Patented Oct. 18, 1887.

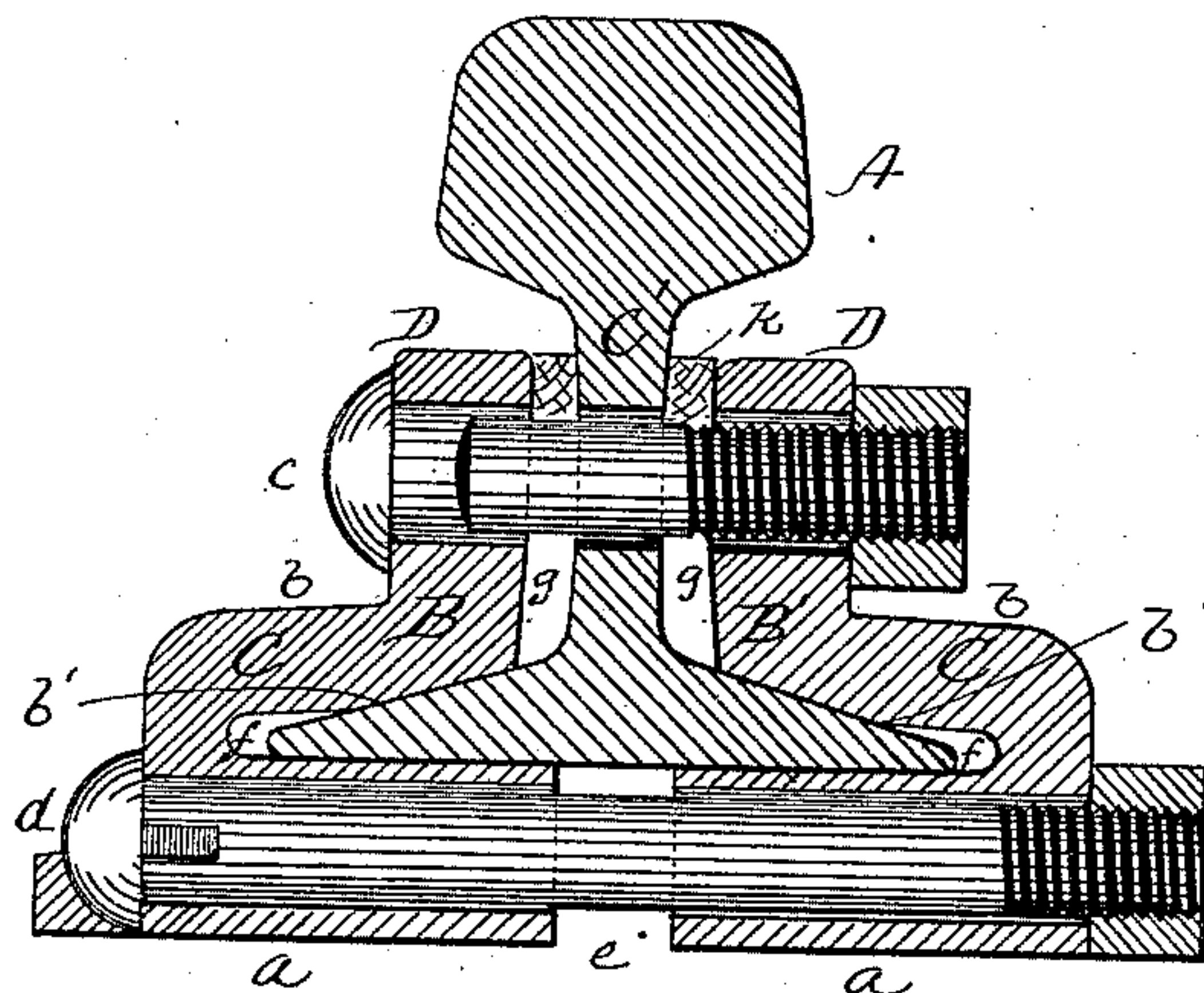


Fig. 2

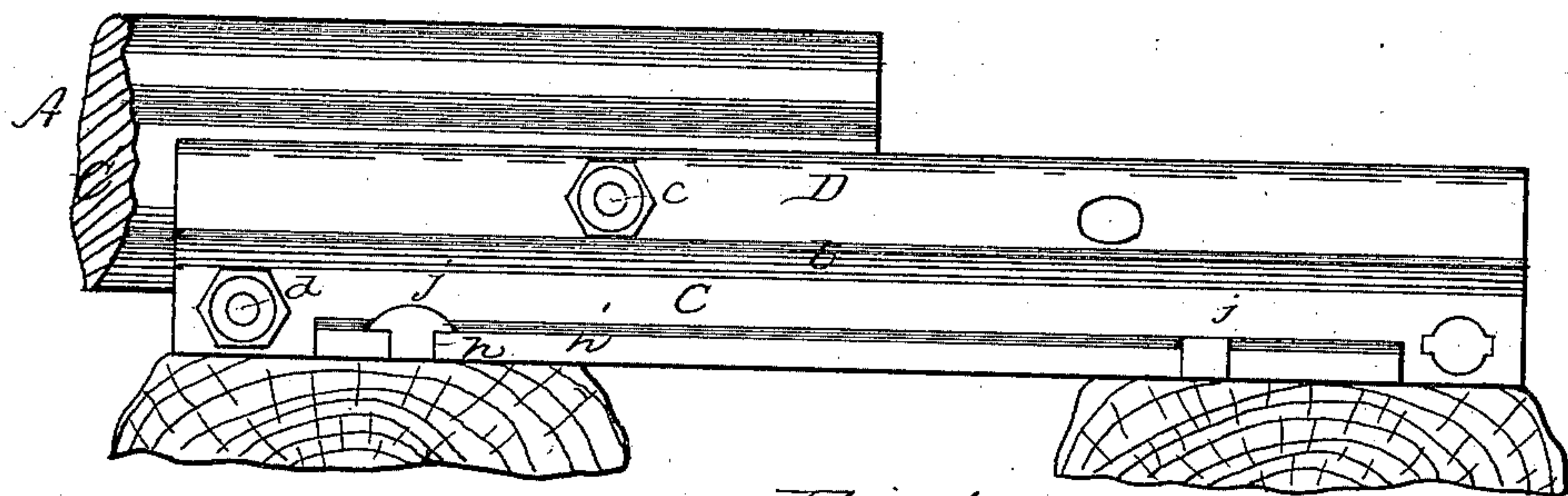


Fig. 1

WITNESSES:

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CHAIR FOR RAILROAD-RAILS.

SPECIFICATION forming part of Letters Patent No. 371,862, dated October 18, 1887.

Application filed July 23, 1887. Serial No. 245,118. (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 construction of twin chairs composed of two interchangeable parts supported upon and lying entirely above the upper surface of the cross-ties and connected together and to the rail by symmetrically-arranged bolts.

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.

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 *f* by the bending of the web C a space, *f*, is left, while between the inner surface of the upright extension D and

the surface of the rail web a space, *g*, is left. The object of the spaces *e f g* is to provide for the drawing up of the chair members to compensate for wear. The parts B B' are coupled together and to the rails by horizontal bolts *c d*, passing, respectively, through the upright extensions of the webs C and rail-web and through the base portion *a*.

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*.

Between the webs C C and the web of the rail, above the bolts *d*, strips of wood or other elastic packing, *h*, are arranged and serve to partially support the webs C, as well as to deaden sound and exclude dirt.

The chair members B B' are secured to the cross-ties by spikes *j*, fitted to slots *h* in the outer edges of 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 parts to expand and contract without binding.

Among the advantages of the chair structure above described, as compared with other forms, are the following, viz: first, the large horizontal bearing-surface over which the stresses are distributed at base of rail as compared with bearing furnished by angle-splices that grip under the head; second, the greater vertical depth and consequent greater strength as compared with other forms of splices and chairs that rest upon the upper surface of ties; third, the symmetrical arrangement of the bolts above and below the grip, whereby the said bolts are saved from cross-strains, and, fourth, the facility with which the wear on the abrading surfaces can be taken up.

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

1. The combination, with the T-rails and the cross-ties, of the interchangeable twin chair-sections B B', formed with the wide base-flanges *a a* and the inwardly and upwardly extended webs C, and connected together by the transverse screw-bolts *c d*, passing through

the web-extensions D and horizontal bases *a*, the extensions D being of less height than the web of the rail, so that the rails are supported entirely upon the bases *a a*, which bases in
5 turn rest upon the upper surfaces of two cross-ties, substantially as described.

2. The combination, with the rails A A, of the twin chair-sections B B', having horizontal bases *a a*, and vertical web-extensions D
10 D, the transverse screw-bolts *c d*, passing through said webs and base, and the elastic

cushioning-strips and dirt-shields *k k*, interposed between the upper parts of the webs D and the web of the rail, substantially as set forth.

In testimony that I claim the foregoing I have
hereunto set my hand this 16th day of July,
1887.

MCLEOD W. THOMSON.

Witnesses:

J. W. WHEATLEY,
W. D. WILKINS.