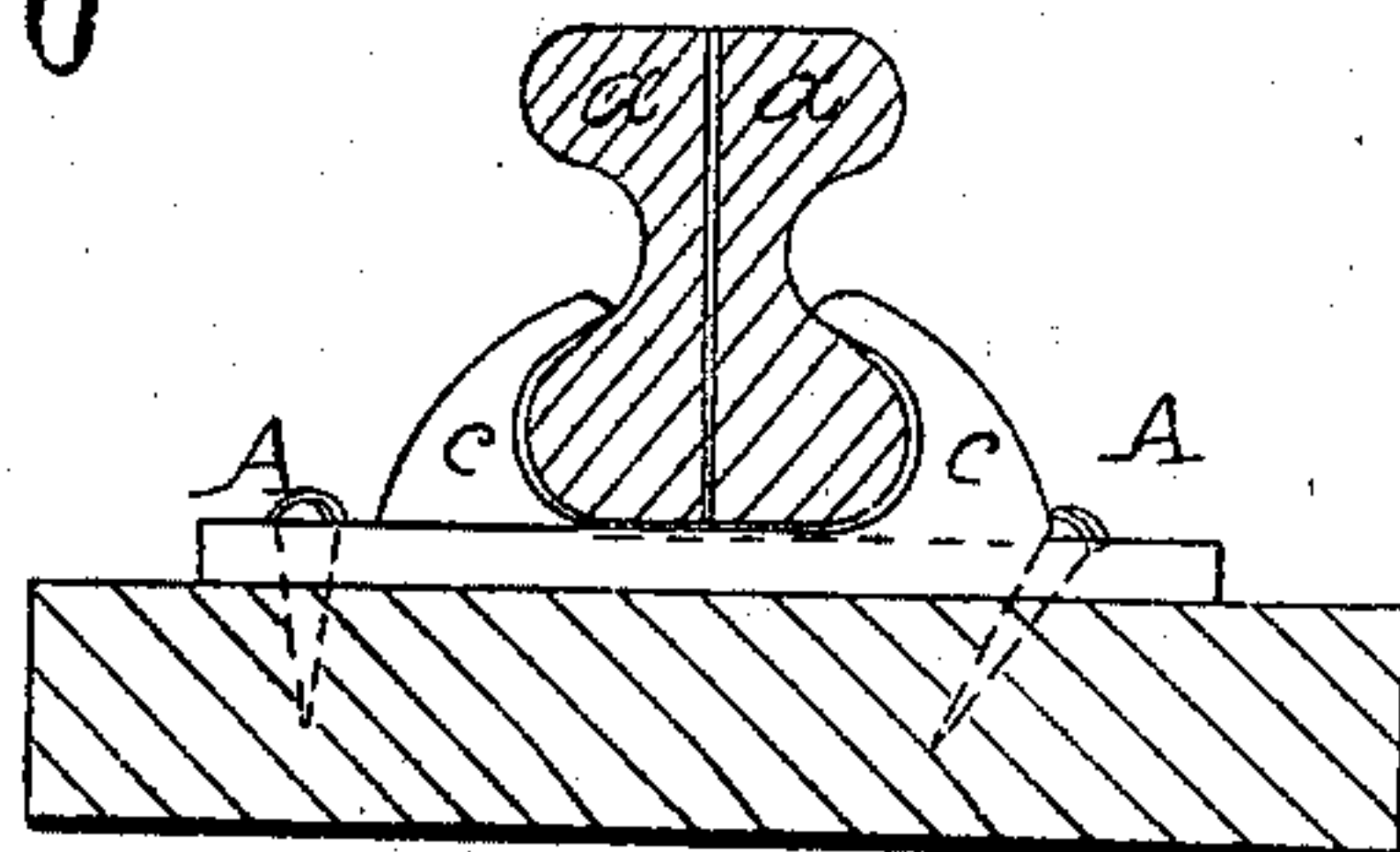


JH Downing's Rail & Chair

Fig 1

72000



PATENTED

DEC 10 1867

Fig 2

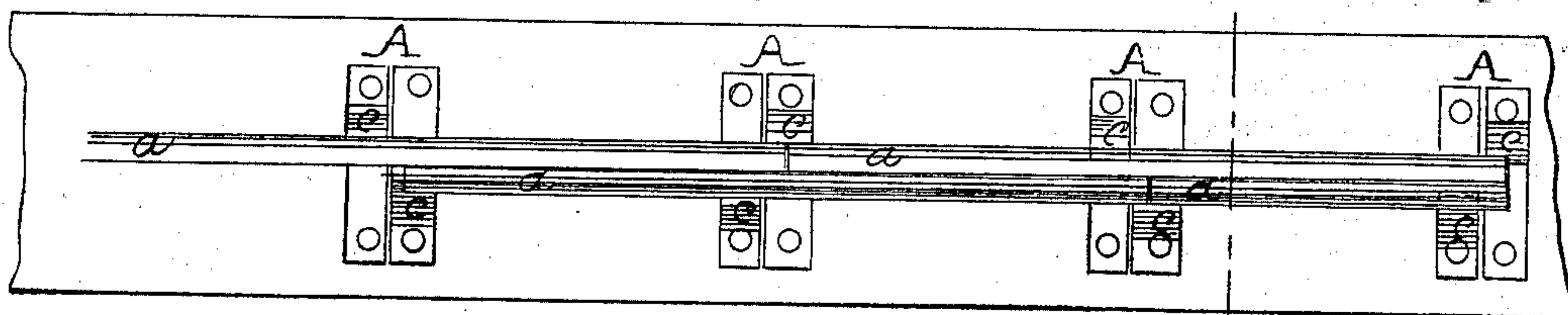
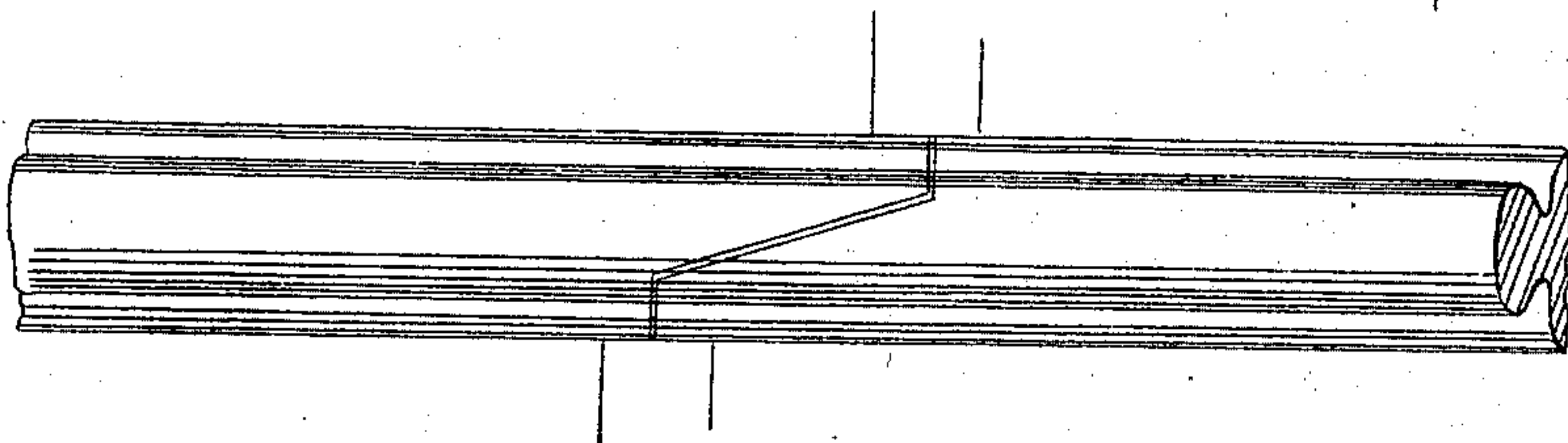


Fig 3



witnesses:

Thos Insch
J Alion Fraser

Inventor:

J H. Downing
Per Munro
Attorneys

United States Patent Office.

JOHN H. DOWNING, OF SALEM, MASSACHUSETTS.

Letters Patent No. 72,000, dated December 10, 1867.

IMPROVED RAILWAY-CHAIR.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, JOHN H. DOWNING, of Salem, in the county of Essex, and State of Massachusetts, have invented a new and useful Improvement in Railroad-Chairs and Rails; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification:

Figure 1 is a cross-section of my improved double-lap rails and chairs.

Figure 2 is a top view of the same.

Figure 3 is a modification of the rail.

Similar letters of reference indicate corresponding parts.

This invention relates to an improvement in the construction of railroad-rails and chairs, and consists in forming the rails in two parts, to lie side by side, with lap-joints combined with narrow chairs, having single heads placed on each side of the rail to clamp the two parts together firmly at the joints, and fasten them to the ties, as hereinafter more particularly shown and described.

The rail is made in equal longitudinal sections *a a*, joined vertically. The sections lap to form break-joints, as shown in fig. 2. They are held together and secured to the ties by narrow single-headed chairs *A*, which are placed with their heads *c* on opposite sides of the rail, bearing on and clamping the base firmly, with one spike only at each end of the chair. The spike-hole, at the head of the chair, is made at an angle with the bottom, to draw the head against the rail, and thus the two single-headed chairs, bearing on opposite sides, will clamp and bind the sections *a a* together firmly, dispensing with wedges used with the ordinary double-headed chair. The spike-hole at the other or smaller end of the chair is made straight, as shown in fig. 1.

In laying rails, a single row of chairs, with their heads *c* on one side, are fastened first by spiking in the straight hole, and the rails being then laid in place against the heads, the chairs with heads on the opposite side are fastened by spiking first through the hole at the head, which, being set at an angle, binds the whole together firmly without employing a wedge. A common rail may be united at the ends with a scarf-joint, as shown in fig. 3, and be fastened with my single-headed chairs to be perfectly secure.

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

The single-headed chair *A*, in combination with a sectional railroad-rail, arranged as and for the purpose shown and described.

JOHN H. DOWNING.

Witnesses:

JOHN D. HAMMOND,

E. A. GOLDTHWAIT.