

(No Model.)

2 Sheets—Sheet 1.

J. W. WALSH.
RAILWAY RAIL JOINT.

No. 415,079.

Patented Nov. 12, 1889.

Fig. 1.

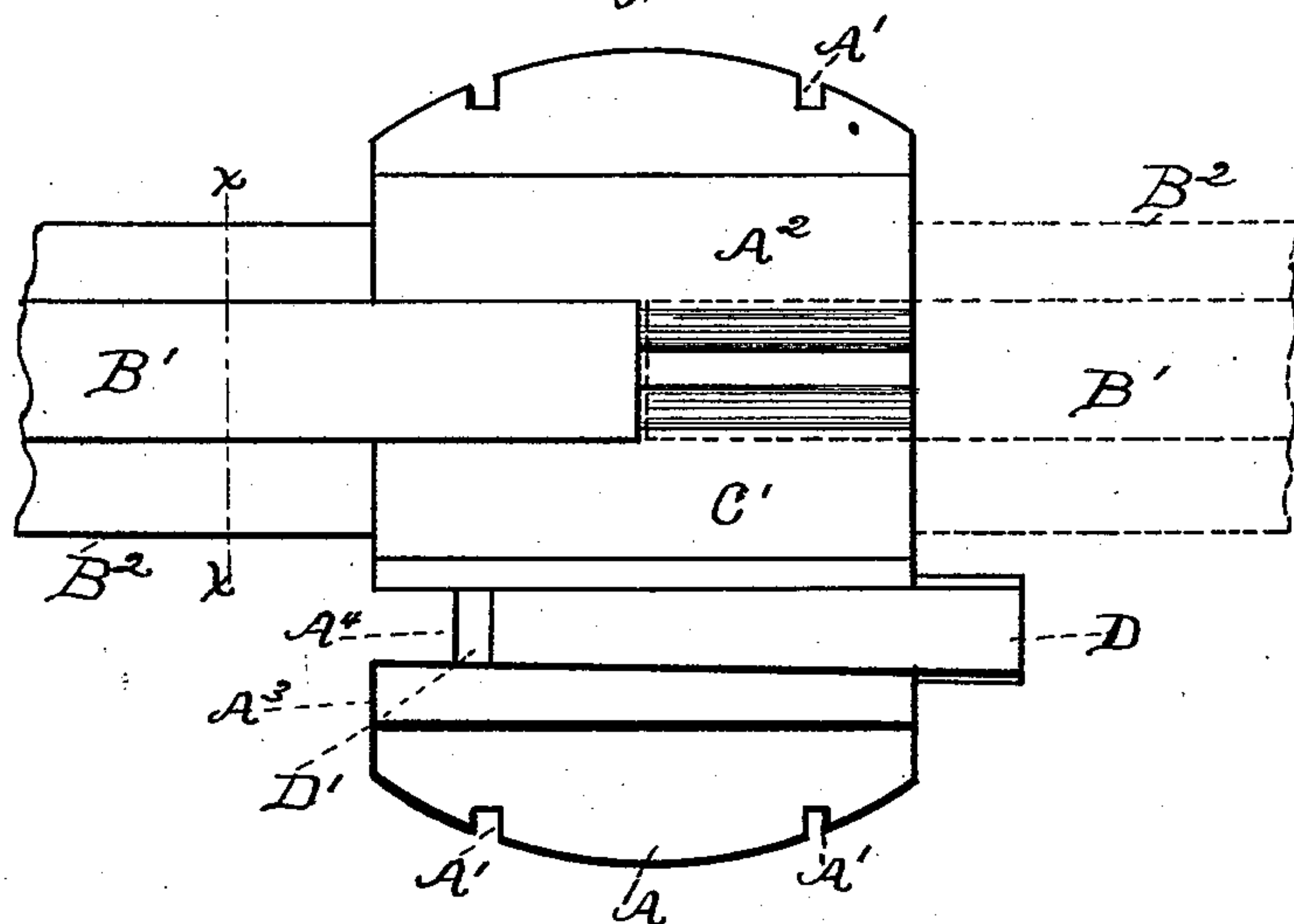
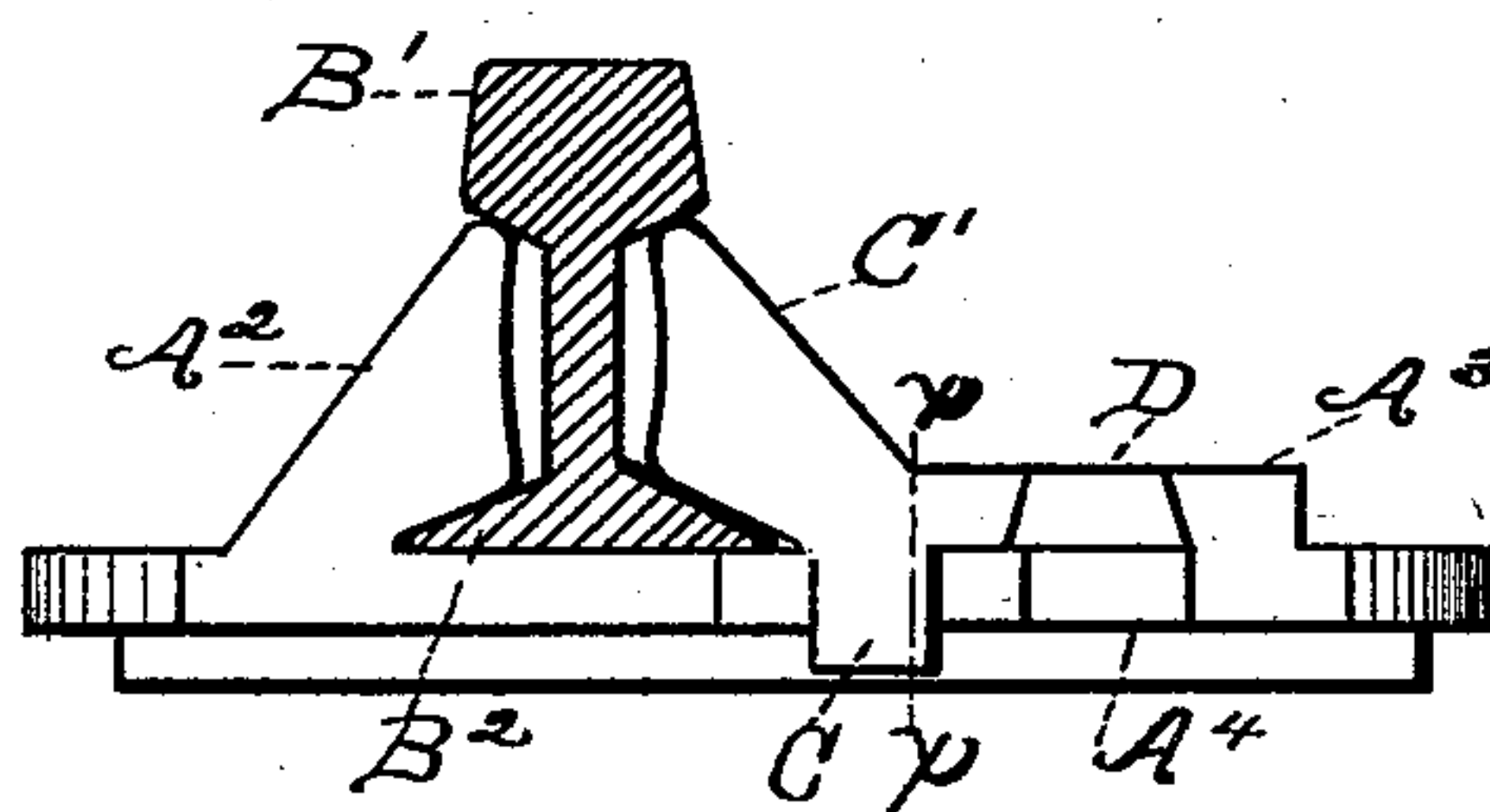


Fig. 2.



WITNESSES:

Frank C. Curtis.
John T. Booth

INVENTOR:

John W. Walsh
by G. W. M. H. att'y

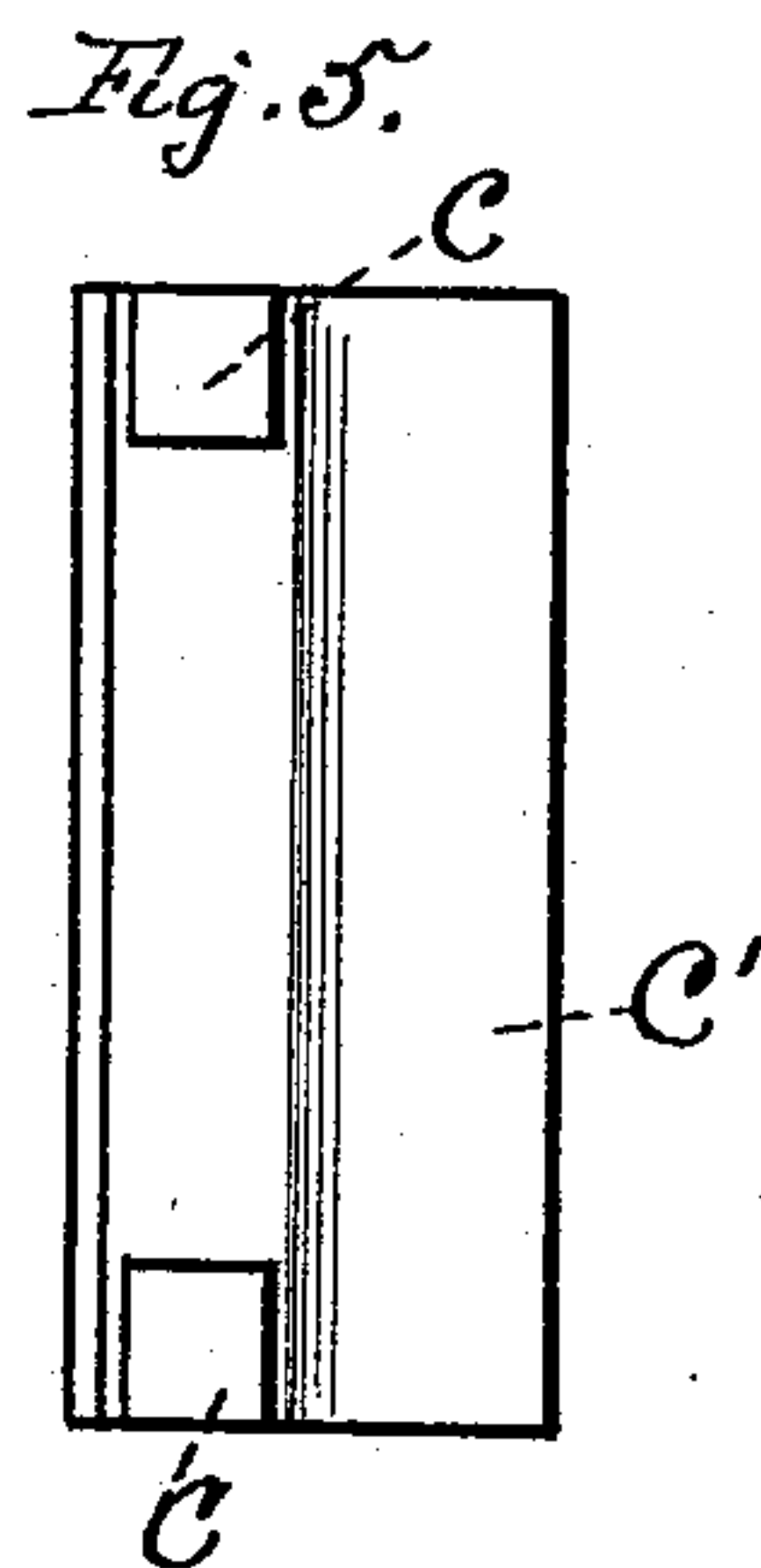
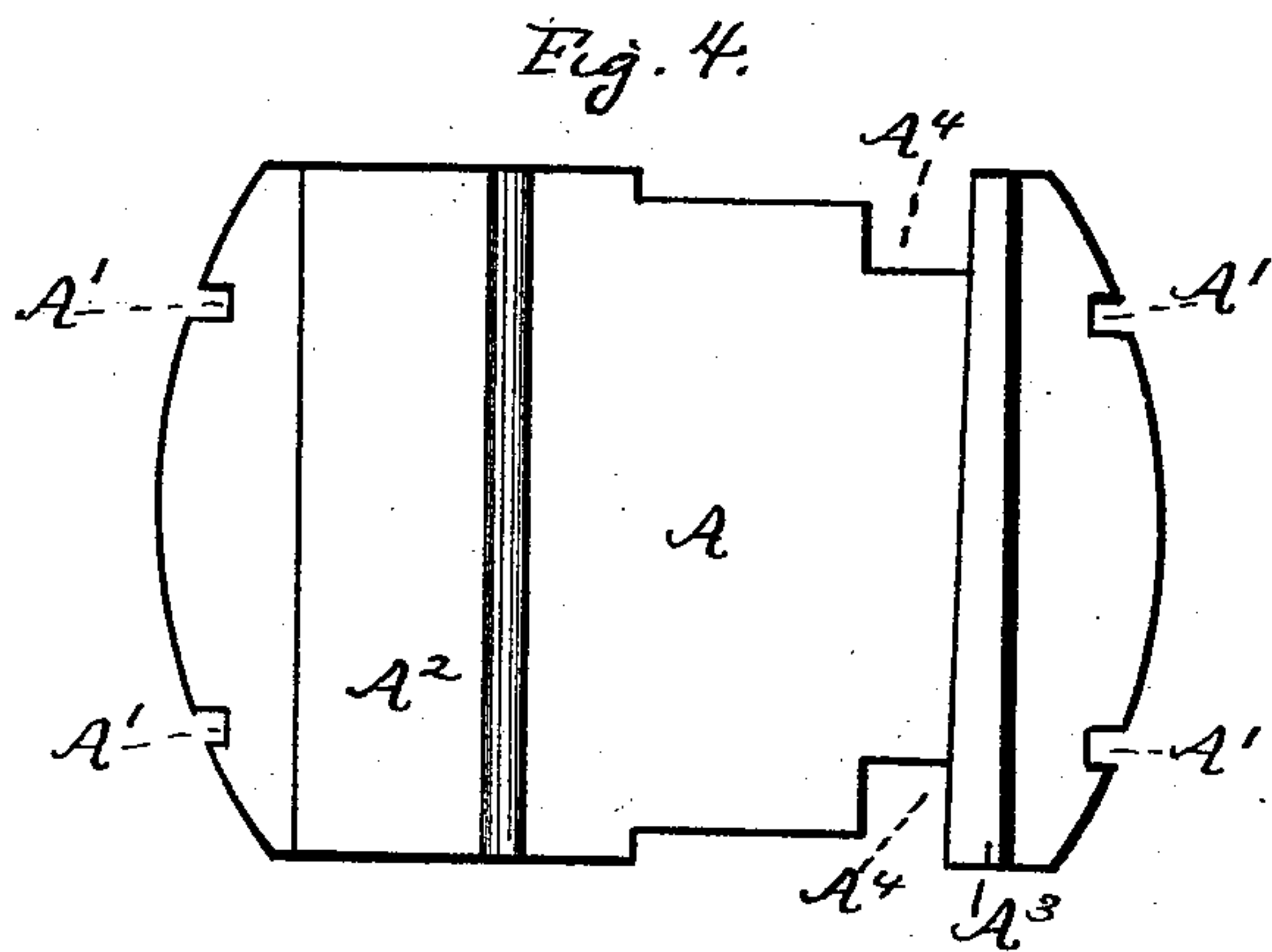
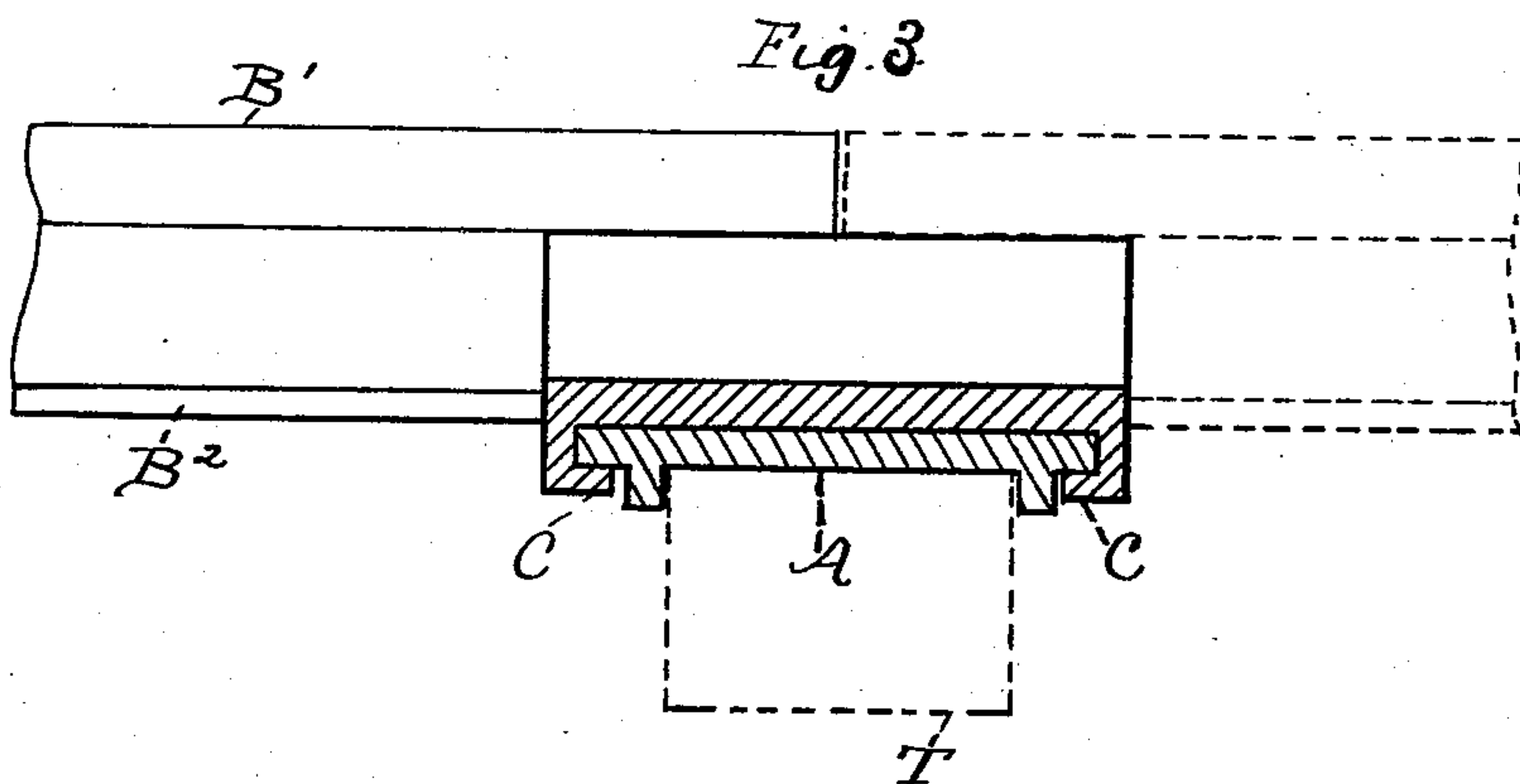
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RAILWAY RAIL JOINT.

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WITNESSES:
Frank C. Curtis
John T. Booth

INVENTOR:
John W. Walsh
by Geo. Mosher
att'y.

UNITED STATES PATENT OFFICE.

JOHN W. WALSH, OF TROY, NEW YORK, ASSIGNOR OF ONE-HALF TO
ERASTUS H. VAUGHN, OF SAME PLACE.

RAILWAY-RAIL JOINT.

SPECIFICATION forming part of Letters Patent No. 415,079, dated November 12, 1889.

Application filed February 11, 1889. Serial No. 299,542. (No model.)

To all whom it may concern:

Be it known that I, JOHN W. WALSH, a resident of Troy, in the county of Rensselaer and State of New York, have invented certain
5 new and useful Improvements in Railway-Rail Joints; and I do hereby declare that the following is a full, clear, and exact description of the invention, that will enable others skilled in the art to which it appertains to make and
10 use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

Similar letters refer to similar parts in the
5 several figures therein.

My invention relates to improvements in railway-rail joints; and it consists of the novel construction and combination of parts hereinafter described, and pointed out in the
20 claims, and is an improvement upon the mechanism described in my prior application, filed in the United States Patent Office, December 15, 1888, No. 293,744.

Figure 1 of the drawings is a top plan view
25 of my improved joint, one rail being shown in position by solid lines and the other rail being indicated by dotted lines. Fig. 2 is a vertical cross-section of the rail, taken on the broken line $x x$ in Fig. 1, and showing my
30 improved device in end elevation. Fig. 3 is a longitudinal vertical section taken on the broken line $x x$ in Fig. 2. Fig. 4 is a top plan view of the flanged chair detached from the other parts. Fig. 5 is a bottom plan view of
35 the detachable rail-sustaining slide-plate and slide hooks or clamps integral therewith.

In my said application No. 273,744 the rail-sustaining slide-plate was provided with a beveled slide-block adapted to fit and slide
40 in an aperture in the base-plate of the rail-chair, which aperture had side walls beveled to correspond with the beveled edges of the slide-block. The dovetail contact of the beveled edges of block and chair served to secure the slide-plate firmly upon the chair during its slide movements to and from the rail.
45

In my improved device, which forms the subject of this application, I secure the slide-plate to the base-plate of the chair by means
50 of hooks or clamps fixed upon or integral with the slide-plates, so as to inclose the edges

of the base-plate of the chair and slide back and forth thereon to hold the rail-sustaining slide-plate upon the chair while the rail-sustaining plate of the chair and the rail-sustaining slide-plate are being forced toward
55 each other to clamp and sustain the rails between them.

The rail-supporting metal chair is composed of a base-plate A, which may have
60 spike holes or slots A' for spiking the chair to a cross-tie, and the rail-sustaining plate or flange A² integral therewith adapted to enter and fit the space between the ball and flange of the rails B, as shown in Fig. 2, B' being the
65 ball, and B² the flange of the rail. The chair is also provided with a rib or flange A³, nearly parallel with the flange or plate A², and with the open-ended slots A⁴, located in opposite sides of the chair-plate, adapted to receive
70 the hooks or clamps C, integral with the rail-sustaining slide-plate C', also adapted to enter and fit the space between the ball and flange of the rails, as shown in Fig. 2.

The operation of the device is as follows:
75 The chair is placed upon a cross-tie, (represented by the broken lines T,) and the contiguous ends of two successive rails in a railway laid thereon, as indicated partly by dotted lines in Figs. 1 and 3. The slide-plate is then
80 placed upon the base-plate of the chair in a position such that its clamp-hooks C pass down through the slots A⁴ in the base-plate and the rail-sustaining plate C' is parallel with the rails. The rail-plate C' and its
85 hooks are then slid toward the rails to about the position shown in Figs. 1 and 2 and the wedge D inserted in the space D' between the flange A³ and the contiguous edge of the slide-plate, as shown in Fig. 1. The wedge
90 may then be driven farther into the space D', thereby forcing both the rail-sustaining plates or flanges C' and A² tightly against the rails and wedging them in between the ball and flanges of the rails, thereby not only forcing
95 and holding the rails in alignment with each other, but materially assisting the webs of the rails in resisting lateral strains.

The clamps C serve to bind the slide-plate and chair firmly together, while the wedge D
100 serves to bind the same parts firmly against the rail, as fully described in my said prior

application, thus maintaining a joint nearly as rigid as though the chair, slide-plate, and rails were all one solid piece of metal.

What I claim as new, and desire to secure
5 by Letters Patent, is—

In a railway-rail joint, a rail-supporting chair provided on one side with a rail-sustaining flange or plate and on the opposite side with a wedge-retaining flange, which
10 flanges are connected by a base-plate having open-ended slots in its opposite edges contiguous to the wedge-retaining flange and forming a slideway for the slide-plate, in combi-

nation with a rail-sustaining slide-plate movable to and fro between the flanges on the 15 chair and provided on opposite sides with base-plate-engaging slide-hooks or clamps adapted to enter the open-ended slots, substantially as described.

In testimony whereof I have hereunto set 20 my hand this 15th day of January, 1889.

JOHN W. WALSH.

Witnesses:

GEO. A. MOSHER,

W. H. HOLLISTER, Jr.

It is hereby certified that the grant in Letters Patent No. 415,079, issued November 12, 1889, upon the application of John W. Walsh, of Troy, N. Y., for an improvement in "Railway-Rail Joints," was erroneously made to "Erastus H. Vaughn," as assignee of the entire interest in the patent; that said Letters Patent should have been granted to said *John W. Walsh and Erastus H. Vaughn, jointly*, said Vaughn being assignee of one-half interest only, as shown by the record of assignments in this office; and that said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed, countersigned, and sealed this 26th day of November, A. D. 1889.

[SEAL.]

CYRUS BUSSEY,
Assistant Secretary of the Interior.

Countersigned:

C. E. MITCHELL,
Commissioner of Patents.