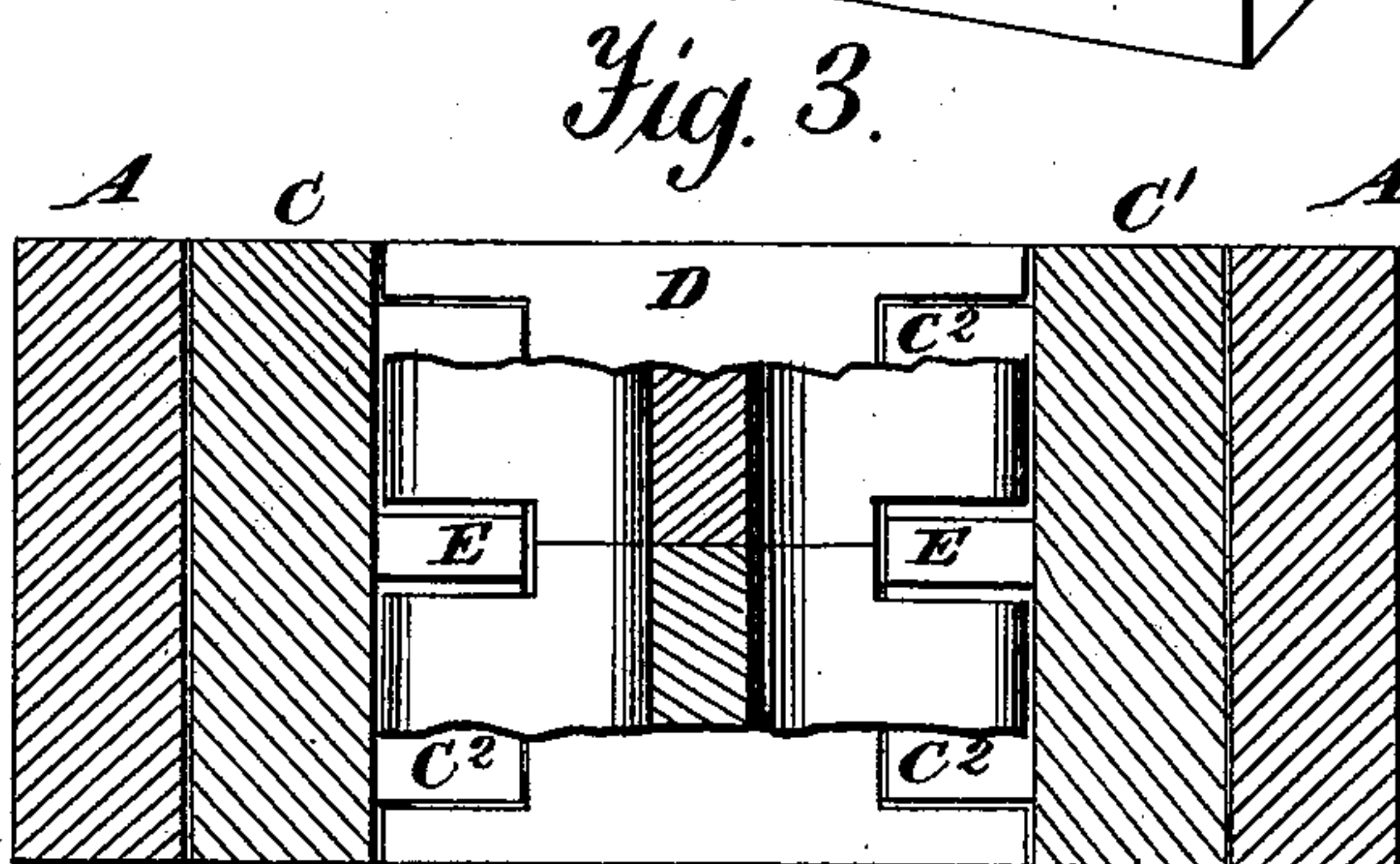
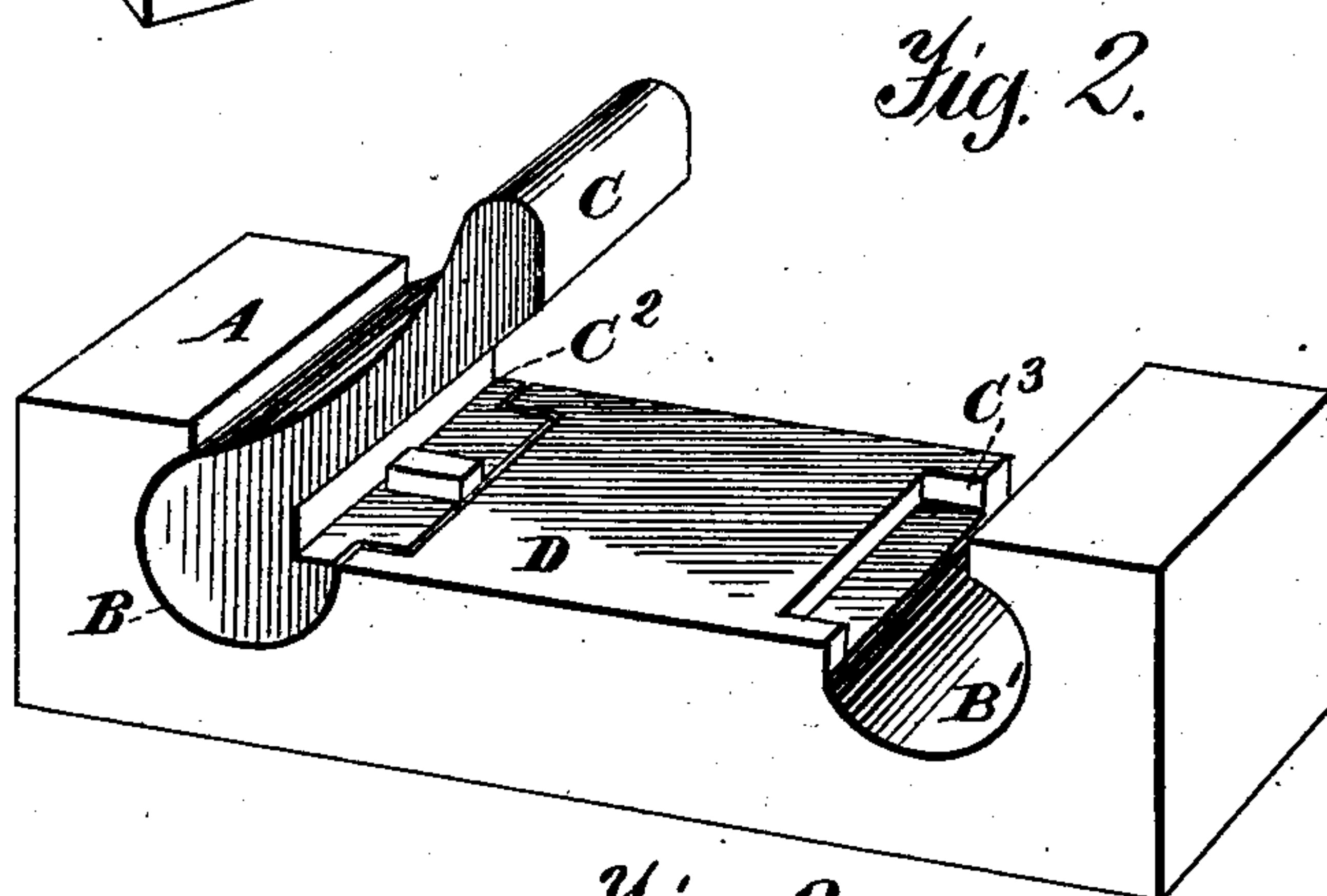
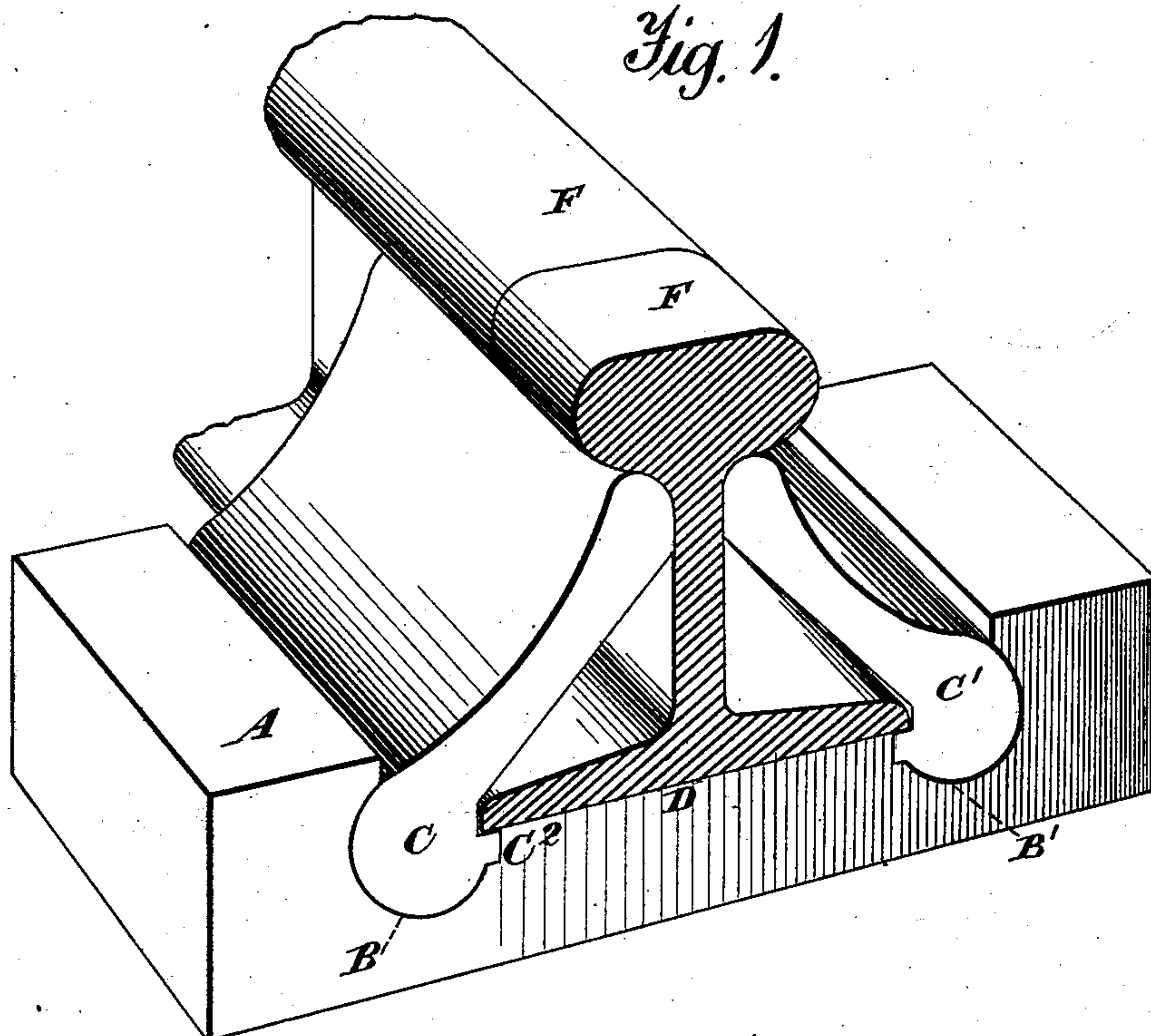


(No Model.)

W. D. HOWARD.
Railroad Chair.

No. 243,562.

Patented June 28, 1881.



Witnesses.
A. Ruppert,
C. M. Connell.

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UNITED STATES PATENT OFFICE.

WILLIAM D. HOWARD, OF NEVADA, MISSOURI.

RAILROAD-CHAIR.

SPECIFICATION forming part of Letters Patent No. 243,562, dated June 28, 1881.

Application filed April 23, 1881. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM D. HOWARD, a citizen of the United States, residing at Nevada, in the county of Vernon and State of Missouri, have invented certain new and useful Improvements in Railroad-Chairs; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters or figures of reference marked thereon, which form a part of this specification.

My invention relates to devices for holding in position the ends of railroad-rails; and the objects of my improvements are, first, to provide a novel construction by which the weight of the engine and cars in passing over it shall cause the rails to be clamped and held firmly in their positions, and at the same time have their heads supported at such times; and, second, to provide novel means for preventing the endwise travel or movement of the rails. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of my improved rail supporting and clamping device, it showing the chair, portions of two rails, and the arms which are made to clamp the rails. Fig. 2 is a perspective view, showing the chair, one of the clamping-arms, the sockets in which such arms rest, the seat for the rail to rest upon, and one of the projections formed thereon for preventing the endwise movement of the rails; and Fig. 3 is a plan view, showing the chair, the clamping-arms, and portions of the rails, with notches in their ends for coming in contact with the stops or projections on the chair.

Similar letters refer to similar parts throughout the several views.

In constructing devices of this character there is provided a chair or seat, A, for the ends of the rails to rest in, which may be of cast-iron or of any other suitable material, and is to be of sufficient thickness to admit of there being formed in it two transverse recesses, B and B', which, in cross-sections, are in the form of the segment of a circle, they being for the reception of the clamping-arms CC', the lower portions of which are rounded, as shown, so

as to allow them to be passed into the recesses B B', and to partially rotate therein.

Upon the inner surface of the rounded portions of the arms C C' there is provided an inwardly-projecting flange or bearing-piece, C², the length of which is less than the width of the chair or seat A, so that it may enter a recess, C³, formed in said chair or seat, and thus be prevented from having any endwise movement when the arms are placed in their seat. When the arms are in position the upper surfaces of their projecting flanges are slightly above the rail-seat D, formed upon the chair, the object being to cause the upper ends of the arms C C' to be pressed firmly against the web of the rail, and thus cause them to support the heads thereof, the weight for producing this result being provided by the wheels of the rolling-stock as they pass over the chair.

The above-described construction of the arms, and of the chairs or seats in which they rest, renders it impossible for the arms to move endwise when they are in place, and in order that the rails may also be prevented from such movement there is placed upon the upper surface of each of the inwardly-projecting flanges of the arm a stop, E, which is firmly secured thereto. This stop projects above the surface of the flange a distance about equal to the thickness of the base of the rail F, each one of which has a notch formed in it, as shown in Fig. 3, it being of sufficient length to permit the rails to expand by the changes of temperature caused by the sun's rays, or of the atmosphere, without its shoulder coming in contact with the stops, but so as only to permit such movement, as if the rails should be inclined to travel lengthwise, as is frequently the case, the shoulders of notches formed in the rails will come in contact with the stops and effectually prevent such movement.

I am aware that it is not novel to use clamping-arms in connection with a rail-chair and the rails of a railroad, or to produce a clamping action upon the rails by the weight of the rolling-stock, such a device being shown in a patent of S. T. Alexander, dated September 1, 1868, and numbered 81,573. Mine differs from this in having the inwardly-projecting flanges upon the clamping-arms extended farther inward, whereby they are made to prevent the

endwise movement of the arms when in position, and in having stops formed on the flanges of the arms, for the purpose of preventing the endwise movements of the rails, except so far
5 as such movement is caused by the expansion of said rails.

Having thus described my improvements, and pointed out the difference which exists between my device and what has preceded it,
10 what I claim, and desire to secure by Letters Patent, is—

1. The clamping-arms C, having an inwardly-projecting flange, notched at its ends for causing it to fit into a recess formed in the chair or
15 seat A, said flange being provided with a stop upon its upper surface for preventing the endwise movement of the rails, substantially as set forth.

2. The combination, in a device for holding the ends of railroad-rails, of a seat or rest having in it a recess for the reception of the flanges of the clamping-arms, whereby the endwise movement of said arms is prevented, and clamping-arms having upon them inwardly-projecting flanges provided with stops E, or
20 their equivalents, for preventing the endwise movement of the rails, substantially as set forth.

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

WILLIAM D. HOWARD.

Witnesses:

M. A. PINKERTON,
C. L. WARE.