

(No Model.)

C. A. WELLER & C. H. ACLY.

RAILWAY CHAIR OR COUPLER.

No. 365,658.

Patented June 28, 1887.

Fig. 1.

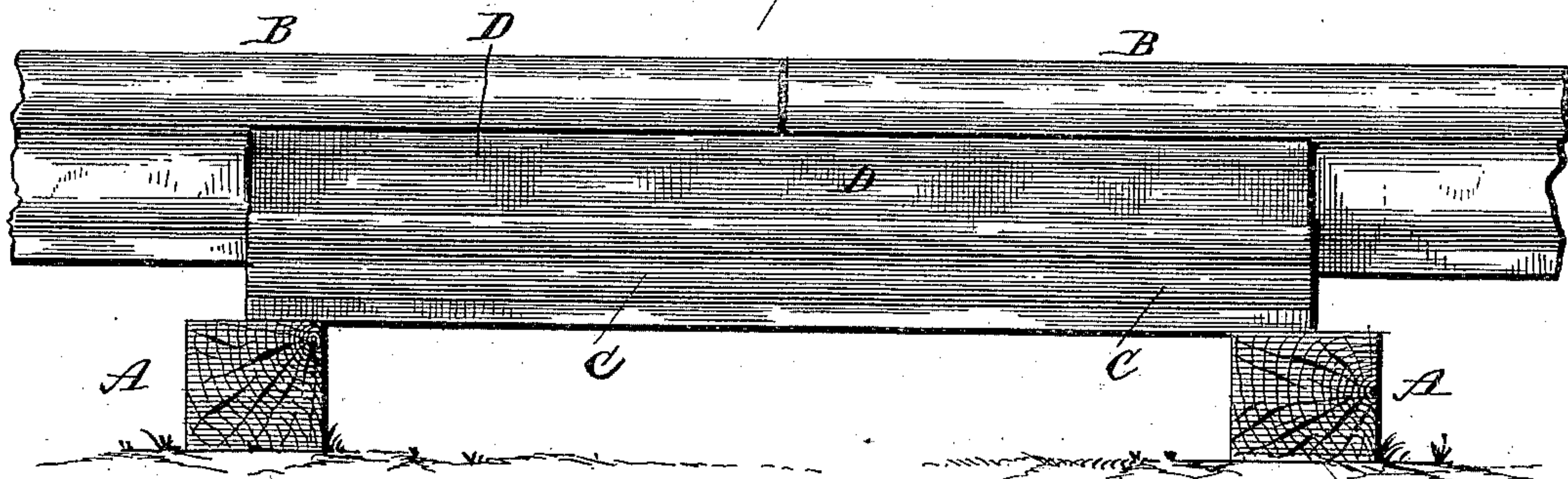


Fig. 2.

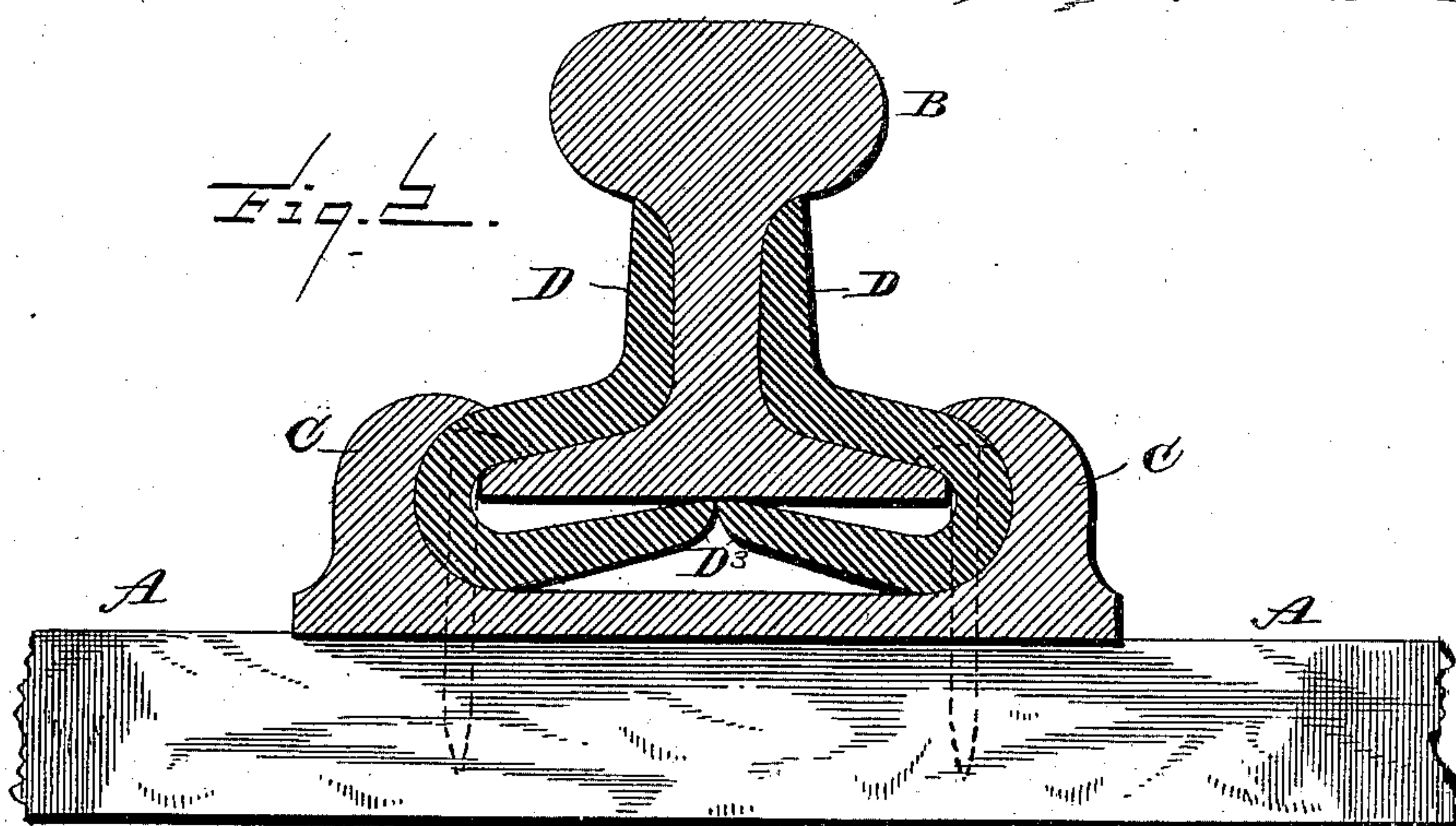


Fig. 3.

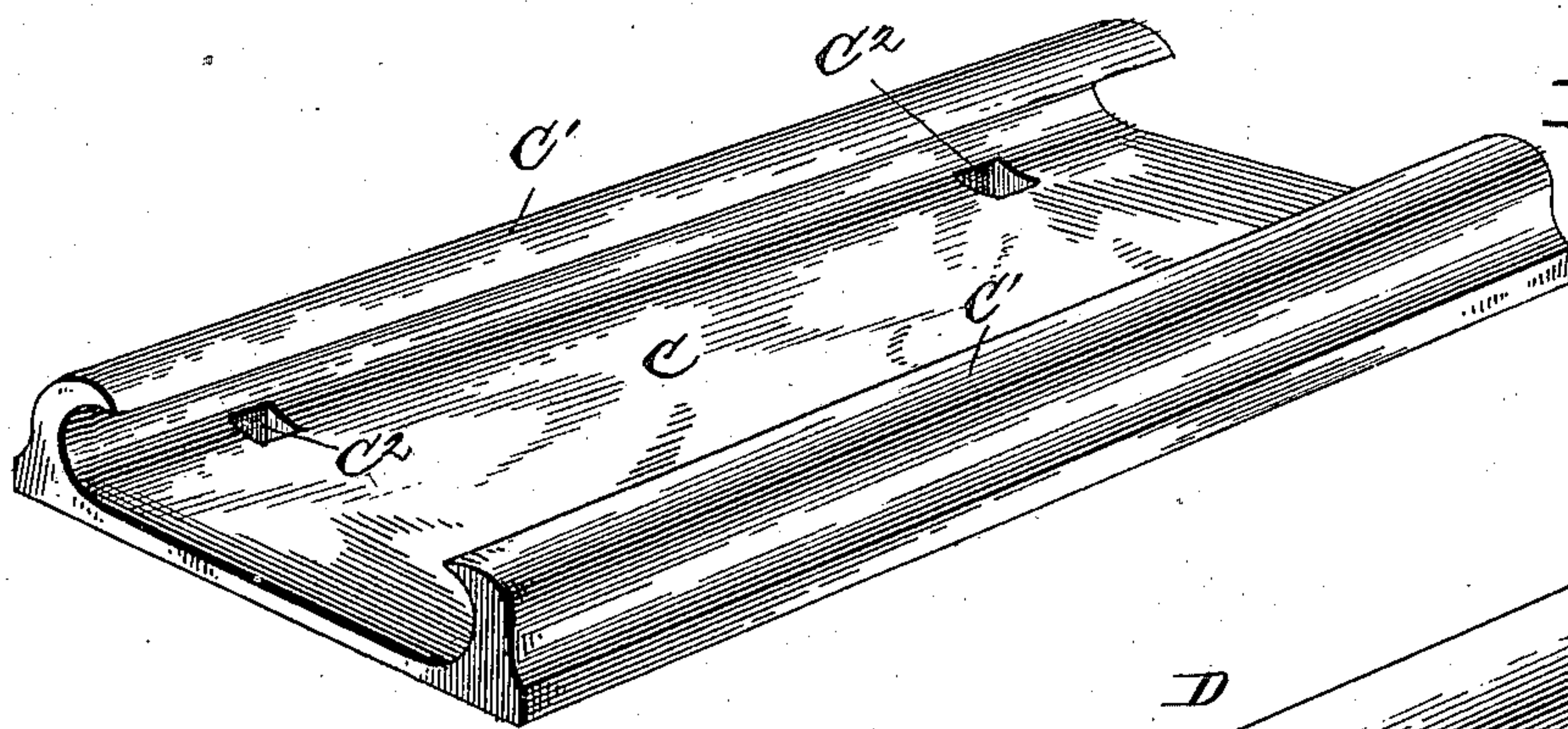
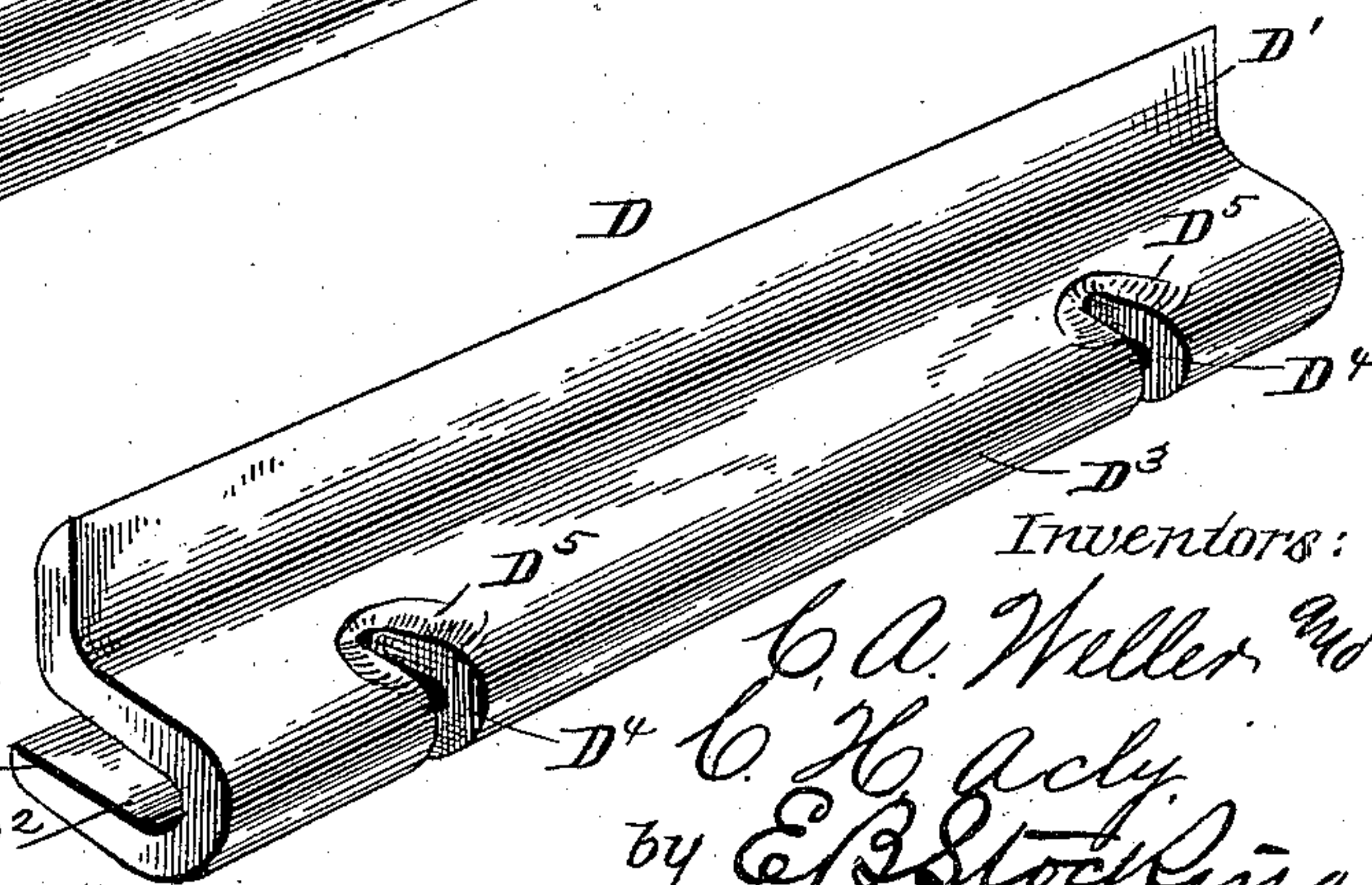


Fig. 4.



WITNESSES
S. C. Hills,
W. S. Duwall.

Inventors:
C. A. Weller and
C. H. Acly.
by E. B. Stocking
Attorney

UNITED STATES PATENT OFFICE.

CHESTER A. WELLER AND CHARLES H. ACLY, OF CROTON LANDING,
NEW YORK.

RAILWAY CHAIR OR COUPLER.

SPECIFICATION forming part of Letters Patent No. 365,658, dated June 28, 1887.

Application filed August 18, 1886. Serial No. 211,201. (No model.)

To all whom it may concern:

Be it known that we, CHESTER A. WELLER and CHARLES H. ACLY, citizens of the United States, residing at Croton Landing, in the county of Westchester, State of New York, have invented certain new and useful Improvements in Railway Chairs or Couplers, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention has relation to railway-chairs, and it has among its objects the provision of a chair and certain accessories which shall serve the purpose of connecting and retaining in alignment two rails without the use of bolts.

Other objects and advantages of the invention will appear in the following description, and the novel features thereof will be particularly pointed out in the claim.

Referring to the drawings, Figure 1 is a side elevation, Fig. 2 a central vertical section, and Figs. 3 and 4 details in perspective, of our railway-chair and its adjuncts.

Like letters indicate like parts in all the figures of the drawings.

Our invention as an entirety constitutes a coupler for connecting railway-rails without the use of fish-plates and bolts.

A A represent ties, and B B rails. Our foundation-plate or chair proper, C, is of a length sufficient to reach from one tie to another and to rest thereon, and has at opposite sides curved flanges C', and through its bottom apertures C², for the passage therethrough of ordinary railway-spikes.

D D are grip-plates formed of iron or steel rolled, swaged, cast, or otherwise shaped, so as to comprise in each a vertical flange, D', adapted to fit the side of the web of the rail, the under surface of the tread adjacent to the web, and in a measure the upper surface of the flange of the rail. Each grip-plate is also adapted to embrace or receive substantially one-half of the base of the rail by being bent or otherwise formed with a channel, D², the outer surface of the bend being adapted to fit the inner curved wall, C³, of the flanges C' of the chair proper. The bottom portion, D³, of each of the grip-plates is extended beyond the vertical flange D', for a purpose hereinafter

stated. Slots or openings D⁴ are formed in the bent edge of each grip-plate for the passage of spikes, and depressions D⁵ are formed in the upper surface of the plate, near each slot, to facilitate the operation of withdrawing the spikes.

The operation of our invention and the manner of using the same are as follows: The rails are lifted above the ties. The chair C is now placed beneath the rails and upon two adjacent ties. A grip-plate is now placed against each side of one of the rails, and is moved therealong—that is, each grip-plate upon each side of the rails is moved along the same and into the curved flanges of the chair. Now, by reference to Fig. 2, it will be seen that the edges of the bottom portions, D³, of the grip-plates support the rail directly under the center of its tread, and that the passages D² are of slightly greater depth than the thickness of the rail base or flange, so that the weight of the rail itself causes the grip-plates to bind firmly against the web of the rail by reason of a certain pivotal movement of the grip-plates within the flanges of the chair. This binding action of the grip-plates, while sufficient by reason of the weight of the rail to retain the rail or rails in a firmly-locked position of proper alignment, is still further and proportionately increased with any increase of the load passing over the rail, and this without any extraneous bolts, fish-plates, or other securing devices; but for the purpose solely for retaining the chair and the grip-plates from longitudinal displacement, we employ spikes, as shown by dotted lines, Fig. 2, which are driven through the slots and apertures heretofore described.

It is apparent that there is independence of action in couplers constructed in accordance with our invention and located on opposite rails of a track at curved portions thereof, so that the greater pressure or load on the outer rail of a curve acts to increase and render more firm the retention of said rail by the increased gripping action of our grip-plates thereon, thus adding to the safety of travel. The absence of bolts passing through the rails permits of any natural expansion or contraction of the rails, and avoids the necessity of

employing a large number of "track-walkers" for the inspection of numerous joints in the track. Under no circumstances can the rails be displaced when the chair is once in position. Any upward movement of rails is at once met by a reversal of the movement of the grip-plates, and the lower flange of the rail becomes instantly locked between its outward upper points and the lower central bearing-points of grip-plates, the whole being firmly held by the curved lips of the chair C, whereby the coupler is absolutely safe under all circumstances.

Certain features of conformation of our base-plate or chair and of our grip-plates are favorable to a practical mode of manufacturing the same at a minimum cost, in that each is capable of being rolled from iron or steel ingots or bars, which may subsequently be cut into desired lengths, and each, especially the grip-

plate, is reversible, in that it may be used upon either side of a rail without change of form.

Having described our invention and its operation, what we claim is—

The combination of the base or chair C, having the curved flanges C' and spike-apertures C², the grip-plates D, having the flange-passages D², vertical flange D', apertures D⁴, and extended bottom portions, D³, and the rails B, together with suitable spikes for retaining the parts against longitudinal movement, substantially as specified.

In testimony whereof we affix our signatures in presence of two witnesses.

CHESTER A. WELLER.
CHARLES H. AGLY.

Witnesses:

JOHN SHARPE,
E. J. BARTON.