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F. H. HOLMAN & E. F. SHAWVER.
BOLTLESS RAIL CHAIR AND COUPLING.

APPLICATION FILED MAY 19, 1903.

NO MODEL.

Fig. 1.

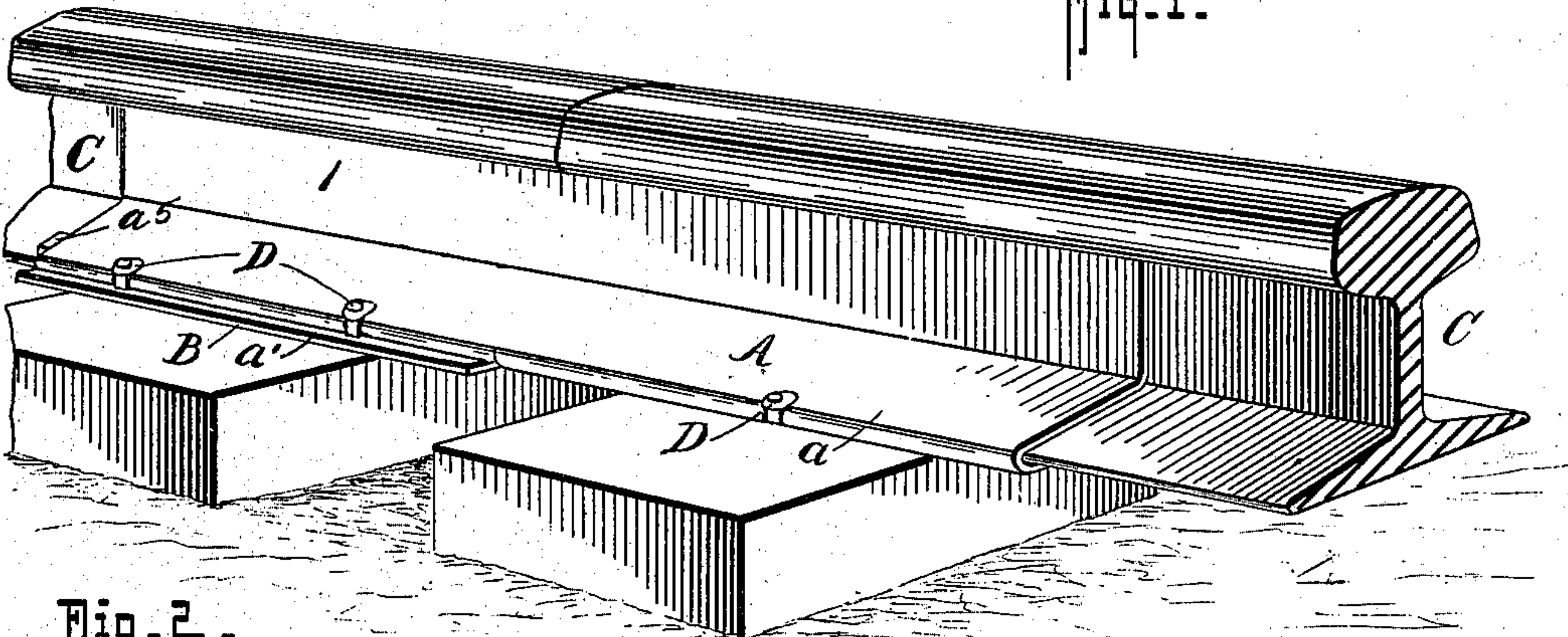


Fig. 2.

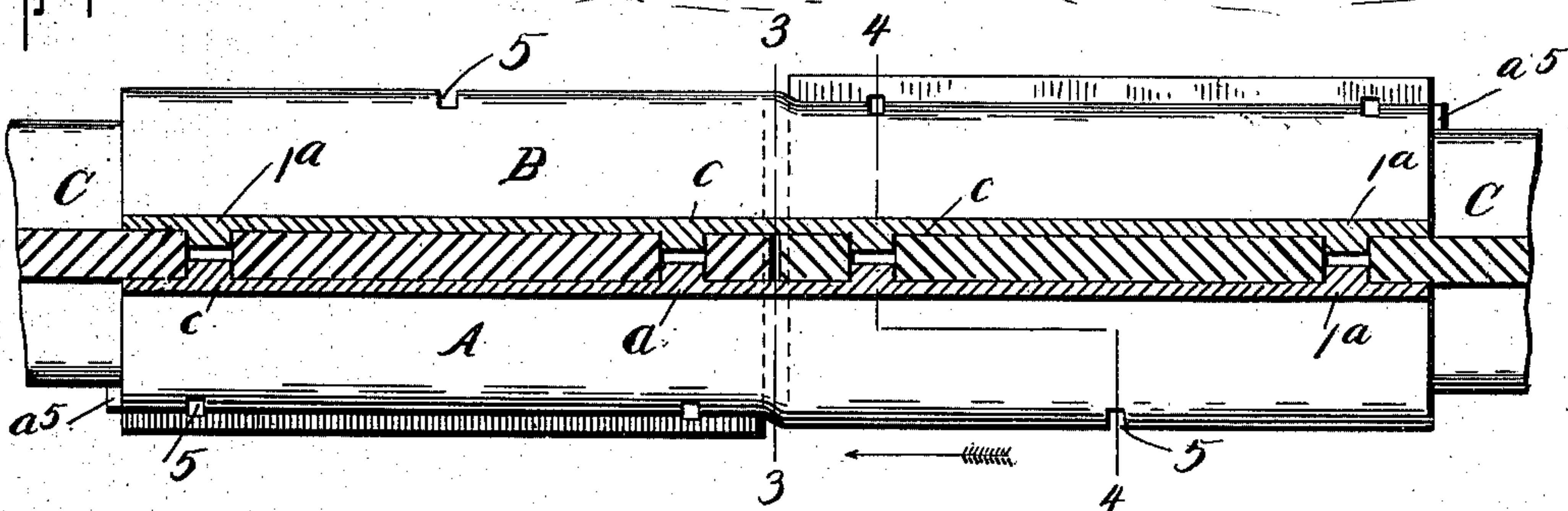


Fig. 3.

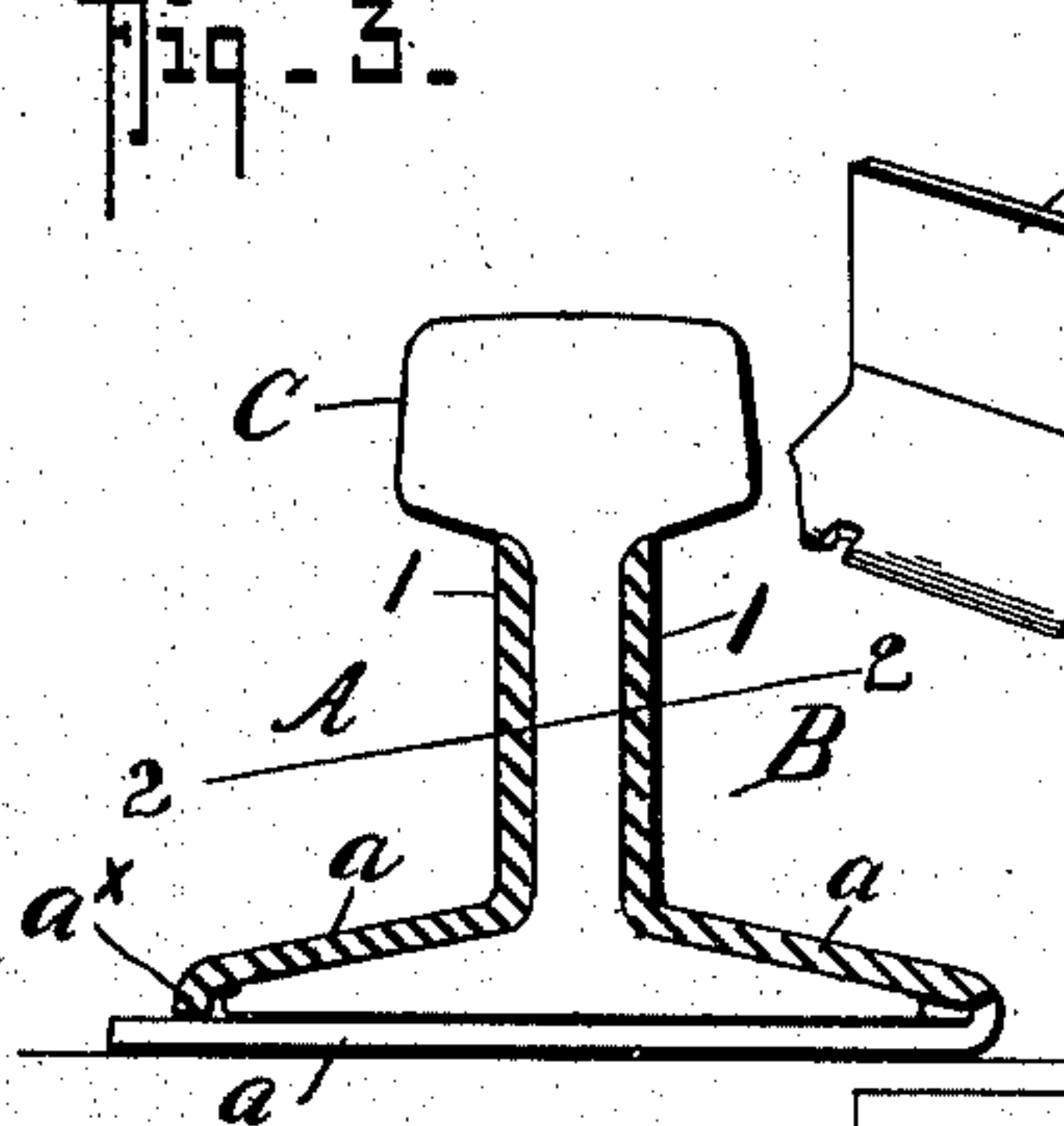


Fig. 5.

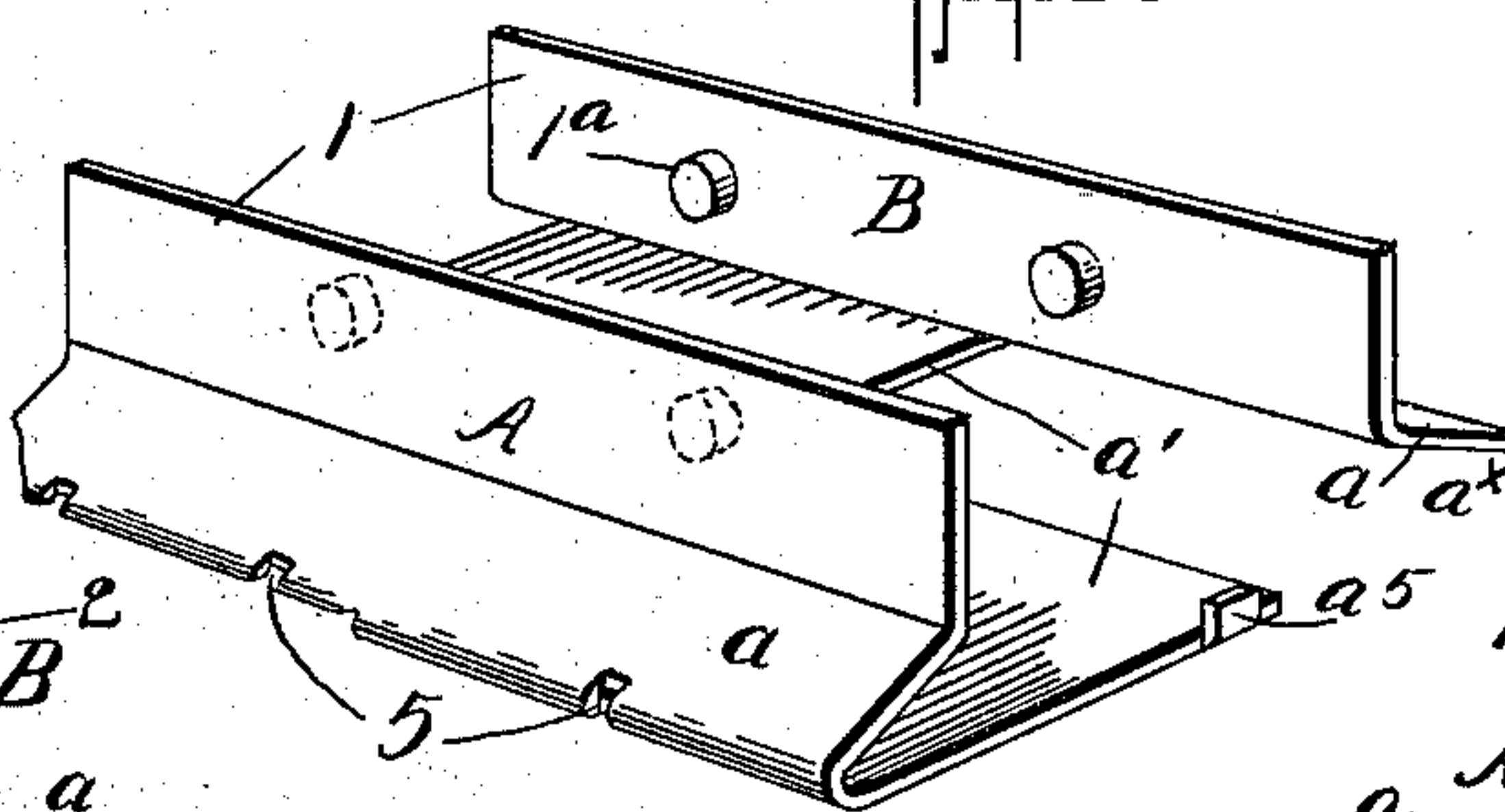


Fig. 4.

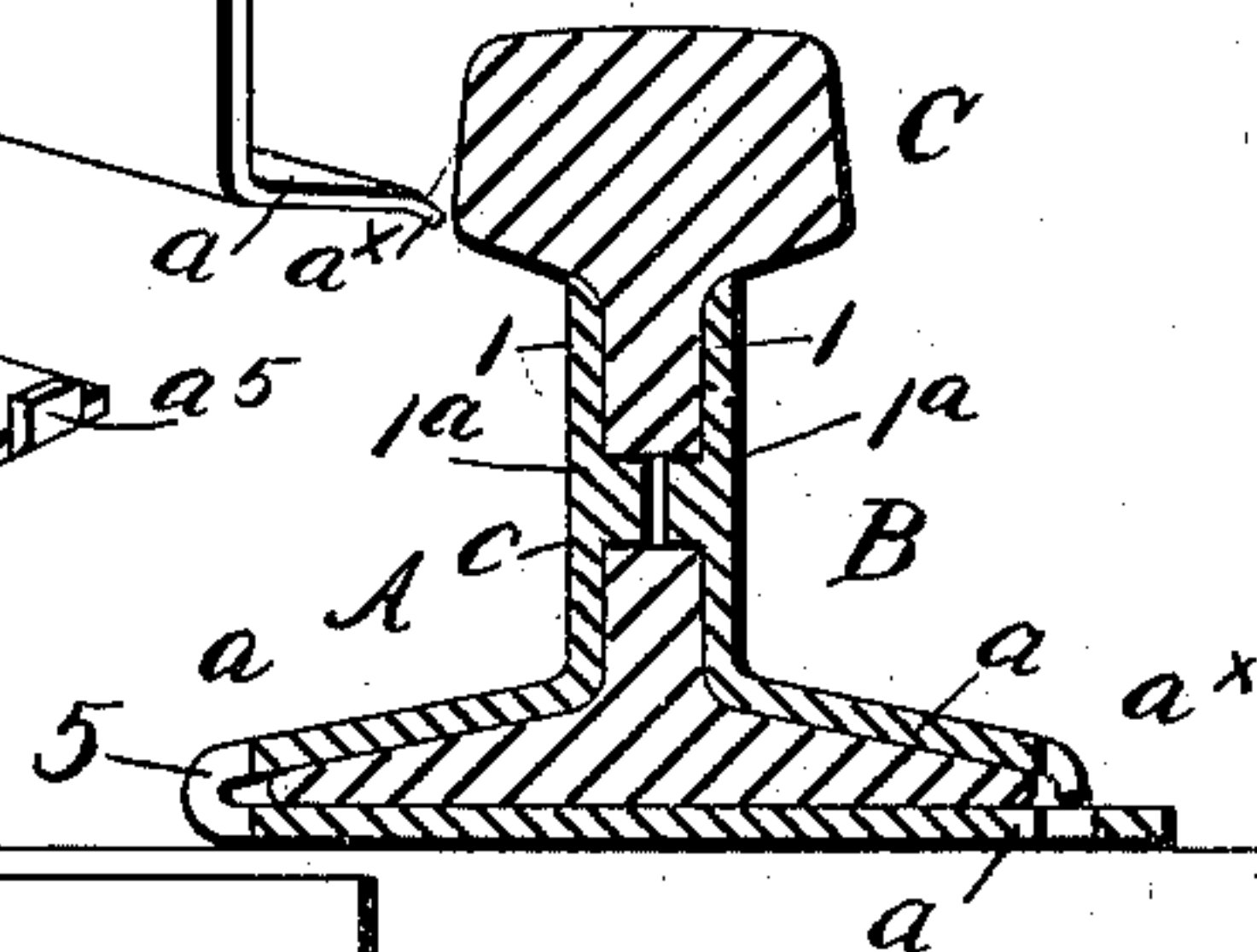
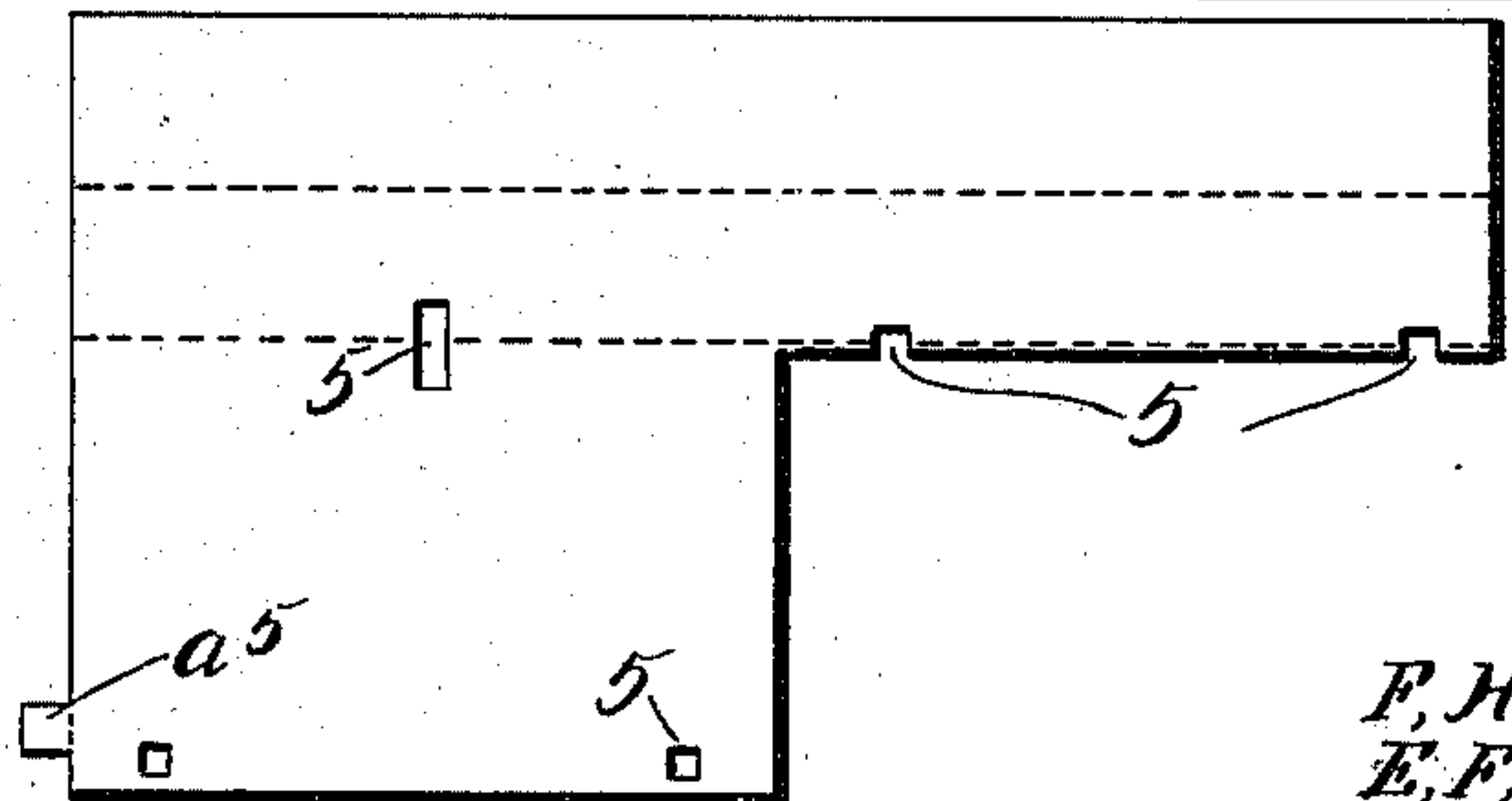


Fig. 6.



WITNESSES:

J. C. Gibson.
John T. Schmitt

INVENTORS:
F. H. Holman.
E. F. Shawver.

BY

Fred G. Dietrich & Co
ATTORNEYS

UNITED STATES PATENT OFFICE.

FRANK H. HOLMAN AND ELMER F. SHAWVER, OF ELIZABETH, ILLINOIS.

BOLTLESS RAIL CHAIR AND COUPLING.

SPECIFICATION forming part of Letters Patent No. 736,258, dated August 11, 1903.

Application filed May 19, 1903. Serial No. 157,815. (No model.)

To all whom it may concern:

Be it known that we, FRANK H. HOLMAN and ELMER F. SHAWVER, residing at Elizabeth, in the county of Jo Daviess and State of Illinois, have invented a new and Improved Boltless Rail Chair and Coupling, of which the following is a specification.

Our invention relates to improvements in that type of rail joints or couplings in which a pair of oppositely-disposed joint-plates having portions that extend under the rails and form a chair or bearings therefor are included and which also have means for interlocking with the rails and with each other; and our invention primarily has for its object to provide a rail joint or coupling means of the character stated of a simple and inexpensive nature that can be readily applied for use and adapted to effectively serve for its intended purpose.

Our invention comprehends a peculiar construction and detailed combination of parts, all of which will hereinafter be fully explained, and specifically pointed out in the appended claims, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view of the meeting ends of a pair of rail-sections with our improvements applied. Fig. 2 is a horizontal section of the same, taken on the line 2 2 of Fig. 3. Figs. 3 and 4 are transverse sections thereof, taken, respectively, on the lines 3 3 and 4 4 of Fig. 2. Fig. 5 is a detail perspective view of the two-part coupling members separated. Fig. 6 is a detail view of a blank from which the said coupling members are formed.

In the practical construction our improved coupling or rail-joint comprises but two parts, (designated A and B,) which are constructed alike and arranged as opposing members, whereby to engage with the meeting ends of the rails, as best shown in Figs. 2, 3, and 4, by reference to which it will be noticed each of the said members A and B is formed of a single piece of metal bent up or otherwise constructed from a blank sheet having the shape shown in Fig. 6 and which in its complete form consists of a long bearing-plate 1, which forms a substitute for the ordinary fish-plate, and the said plate 1 has integral nibs or studs 1^a 1^a, that project inwardly to fit into the usual bolt-apertures *c c* in the meeting

ends of the rail-sections C C, as clearly shown in Fig. 2, from which it will also be seen the studs 1^a on the plate 1 of the member B engage with one side of the rail ends C C and the studs 1^a, projected into the bolt-apertures *c c* (or recesses) from that side, and the plate 1^a of the member A engages the other side of the rail ends C C, with its studs entering the bolt-apertures on the said side and opposing the studs 1^a on the plate 1 of the member B.

The plates 1^a of the members A and B each have their lower ends bent outwardly, as at *a*, to snugly fit on the upper beveled face of the base of the rails C, and at one end the bent portions *a* merge with a horizontal member *a'*, which extends transversely under the rail-base and forms a chair or bearing therefor, and the said portion *a'* is of a length sufficient to extend beyond the foot or flange of the rail at the opposite side, for the reasons to presently appear.

The horizontal portion *a'* of the members A and B extends about one-half, more or less, the length of the plate portions 1, and that end of the flange member *a* beyond the portion *a'* is bent down, as indicated by *a^x*, to lap over the corresponding edge of the rail-base, and the said portion *a^x* of the sections A and B are bent down sufficiently to rest upon the transversely-projected horizontal members *a'*, the portion *a^x* of the section *a* resting on the base member *a'* of the section B, and the portion *a^x* of the section B rests on the portion *a'* of the section A, as shown.

The outer edge of the flange portions of the sections A and B have spike-notches 5, which when the parts are assembled register with the spike-apertures in the horizontal extensions *a'* to provide for the convenient insertion of the spikes D D. At the outer edge each member *a'* may have an upturned flange *a⁵*, if desirable, which overlaps the edge of the adjacent covered portions *a⁶* of the base members A and B. This flange may, however, be dispensed with in the practical use of our invention.

From the foregoing, taken in connection with the accompanying drawings, it will be apparent that by constructing the parts A and B in the manner stated and shown the said parts act as opposing clamp members, the one being connected with the rail-section,

while the member B is made fast to the opposite side of the rail ends, with its portion a' apertured in a reverse direction to the portion a' on the member A and under the end 5 of the opposing rail-section. Thus the two parts A and B firmly interlock with the rail ends to prevent longitudinal separation or creeping thereof through the medium of the studs engaging the holes or seats in the faces 10 of the rails and by reason of the two cross portions a' a' abutting each other endwise, longitudinal play of the two members being further prevented by the flanges a^5 .

The cross portions a' a' form solid metal 15 chairs or seats for the rails, and by reason of the turn portions a^6 at the opposite sides of the rails and the spike-fastening in the ends of the portions a' the coupling or joint is held from lateral play in a manner to rigidly 20 retain the rails when in a proper alinement.

We are aware that it is not broadly new to provide a combined metallic rail coupling or chair composed of two opposing clamping members having means for attaching to a 25 tie and bent into a shape to clamp the web and base of the rails.

Our invention, so far as we know, differentiates from what has heretofore been done in this line in the peculiar manner in which 30 the opposing clamping members A and B are constructed and in their correlation when the parts are assembled, the transversely-projecting horizontal extensions turned from one end of the foot portion of the clamping 35 members, the downwardly-bent portions of the remainder of the other end of the said clamping members, the alternately-disposed arrangement of the horizontal members, and the end or locking flanges, as hereinafter set 40 out in the claims.

Having thus described our invention, what we claim, and desire to secure by Letters Patent, is—

1. A rail chair and coupling comprising in 45 combination; a pair of opposing metallic clamp members, each having a vertical member for engaging the web or side of the rail provided with portions adapted to interlock with the apertures in the rails, the lower end 50 of the said vertical members terminating in horizontally-inclined foot portions for engaging the top of the rail-base flanges, said foot portions having their outer end bent to fit over the edge of said rail-base flanges, 55 said foot portions also having flat transversely-projected horizontal extensions adapt-

ed to fit under and project beyond the rails and the horizontal extension of one member being projected in opposite direction to the other member, said horizontal extensions being 60 provided with bent-up portions to interlock with each other at the ends, as shown.

2. The combination with the meeting ends of a pair of rails; the coupling means therefor consisting of a pair of oppositely-disposed 65 metallic members each including a long clamping portion adapted to engage with and straddle the meeting ends of a pair of rail-sections and provided with bulges or ribs to enter the rail-apertures, the lower end of 70 said clamping portions being inclined downwardly and outwardly to engage the upper face of the base-flanges of the rails, said lower portions having downwardly and transversely and inwardly bent horizontal extensions 75 that form chairs or bearings for the rail end, said extensions being of greater length than the width of the rails and alternately disposed, the free end of one extension being projected under the downturned 80 edge of the base-flange-engaging portion of the opposing clamp member, and provided with upturned flanges for engaging the outer edge of the said base-flange-engaging member, the base-flange portions and the coincident 85 end of the horizontal extension having alining openings to receive the securing-spikes, as set forth.

3. As an improvement in rail couplings and chairs, a metallic clamp comprising a longitudinal clamping member adapted to straddle 90 the meeting ends of a pair of rails, said clamping member including a vertical portion, and outwardly and downwardly bent foot portion adapted to engage the upper face 95 of the base-flange, said foot portion merging at one end with a transversely-projected horizontal extension of a length sufficient to project under and beyond the rail and the other end of said foot member terminating 100 in a downwardly-bent edge, one end of the horizontal extension having an upturned flange and the other end of said extension and the bent edge of the foot portion of the clamp having spike-receiving openings, all 105 being arranged substantially as shown and described.

FRANK H. HOLMAN.
ELMER F. SHAWVER.

Witnesses:

N. A. GAULT,
C. H. BRAY.