

No. 721,180.

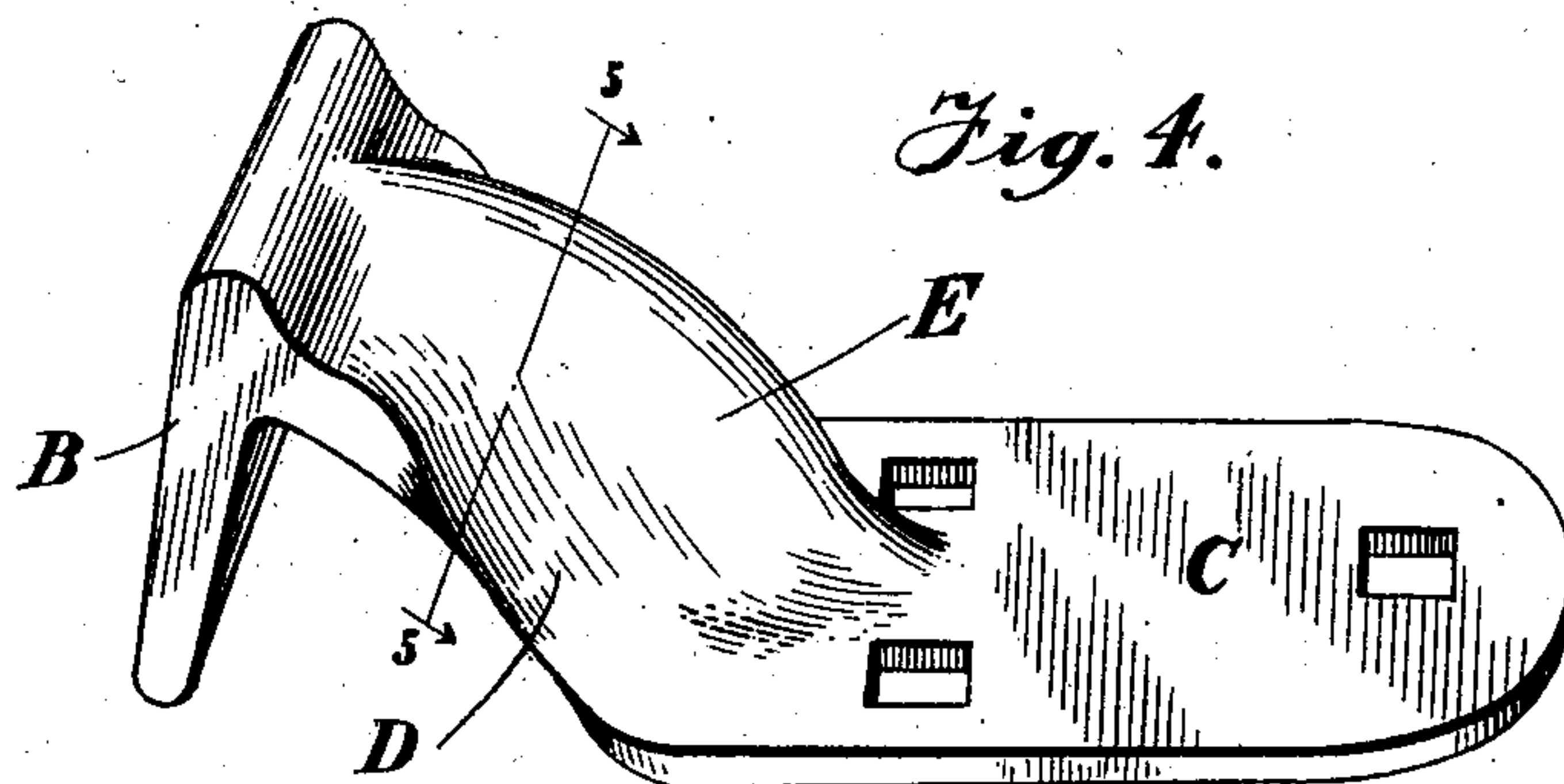
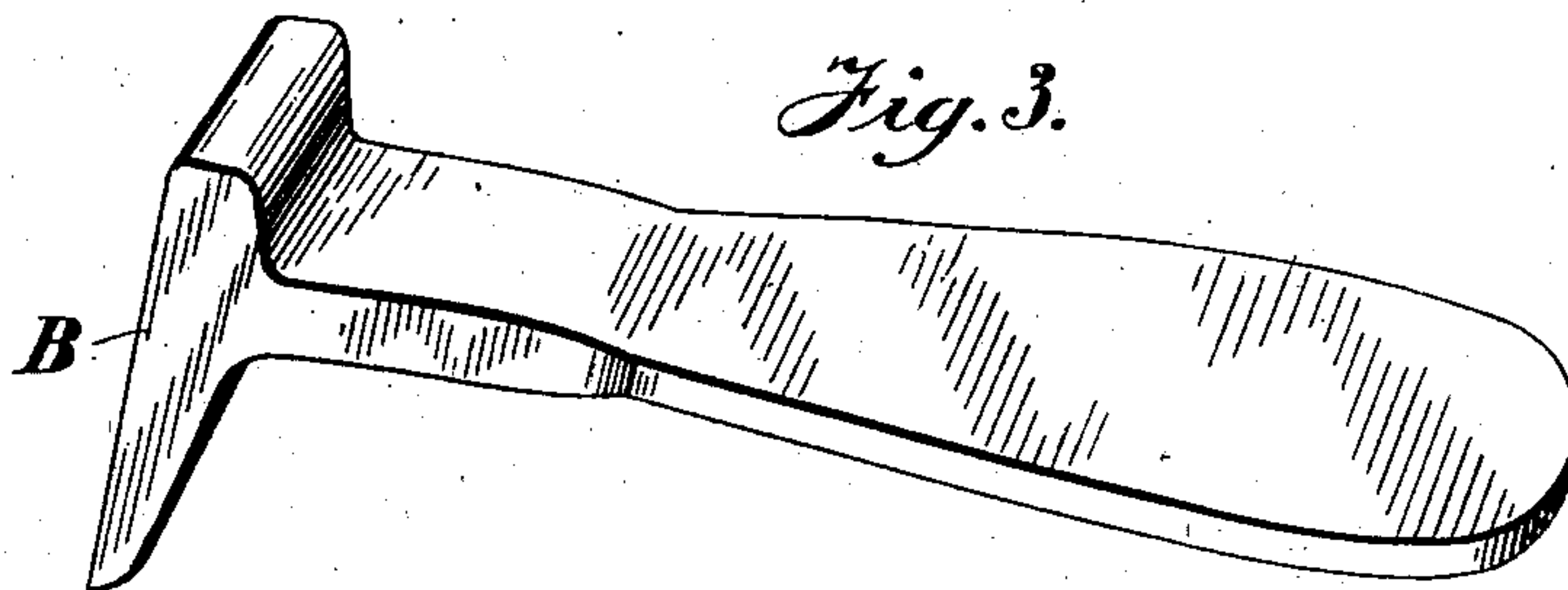
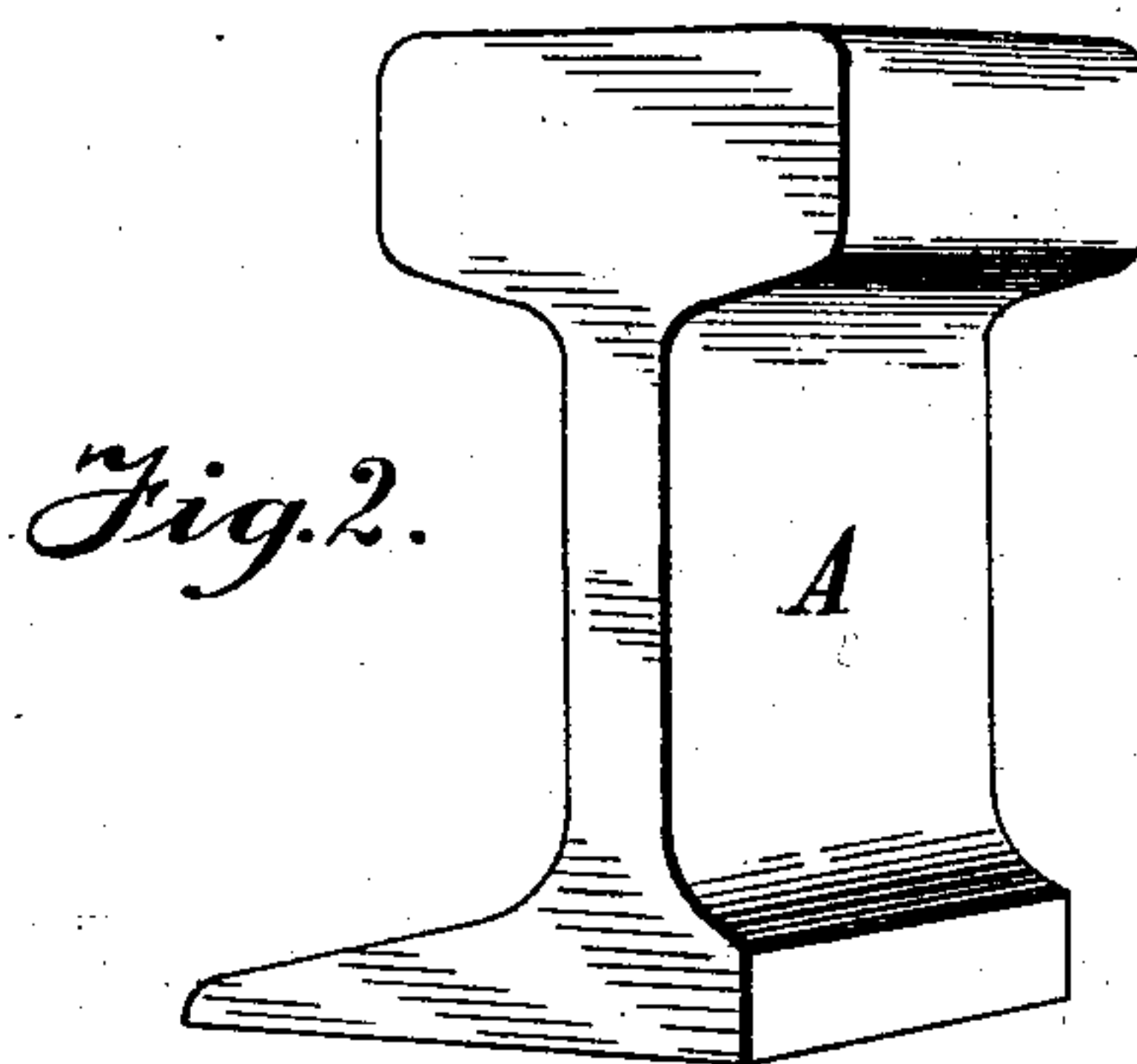
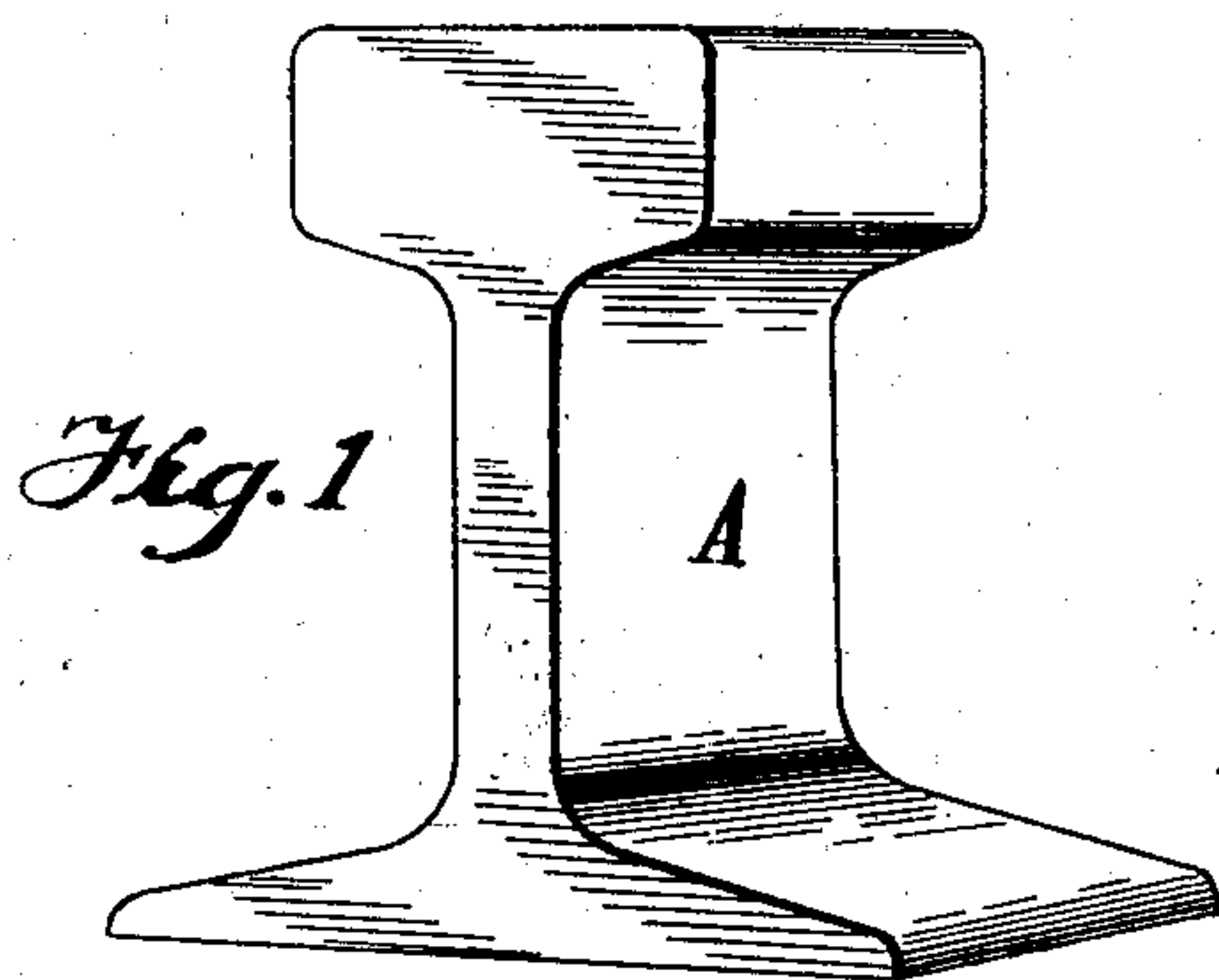
PATENTED FEB. 24, 1903.

T. A. GRIFFIN.
RAIL BRACE.

APPLICATION FILED MAY 7, 1902.

NO MODEL.

2 SHEETS—SHEET 1.



Witnesses:
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Chas. D. Perry

Inventor:
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By *Raymond H. Barnett*
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2 SHEETS—SHEET 2.

Fig. 6.

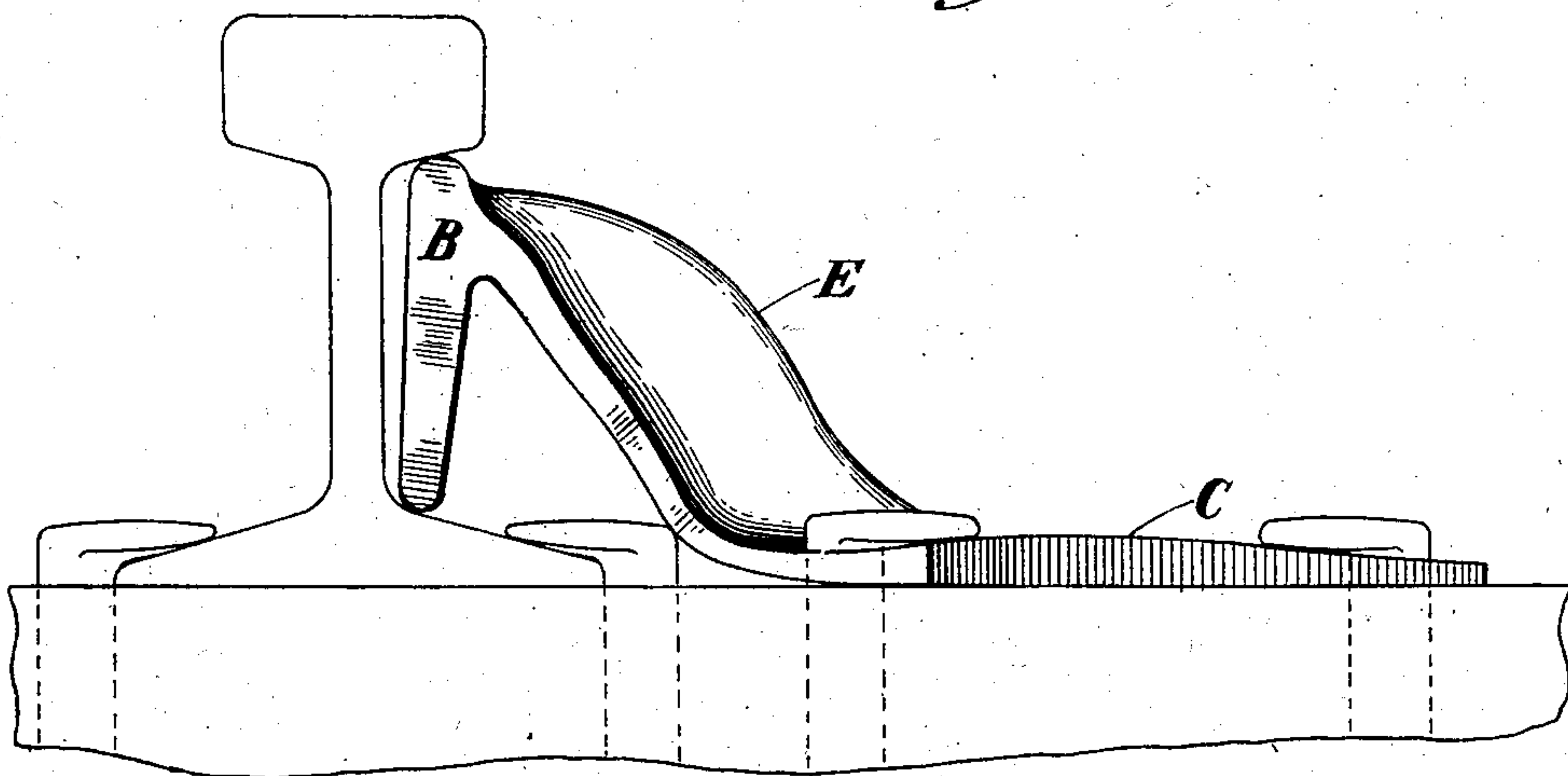
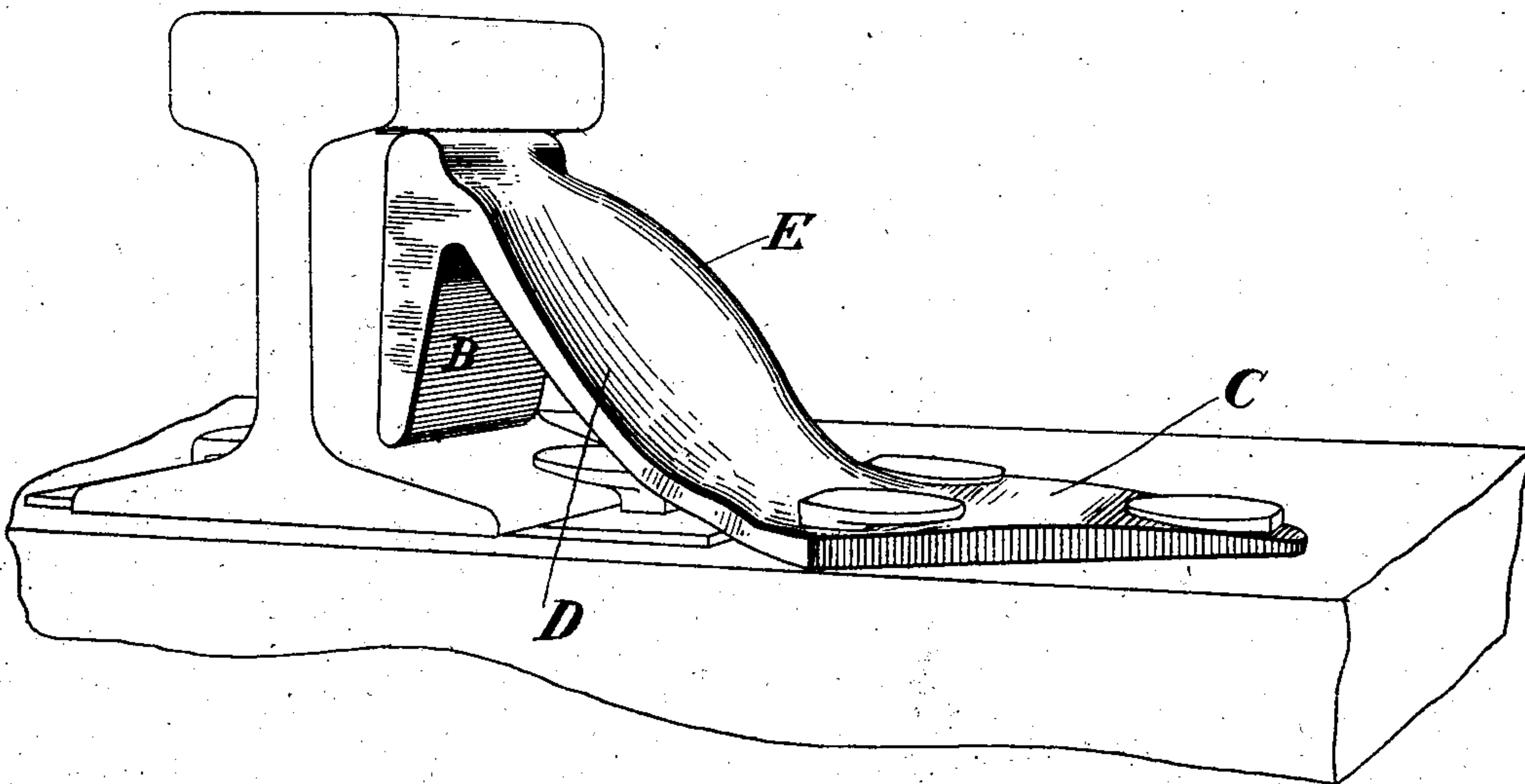


Fig. 5.



Fig. 7.



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UNITED STATES PATENT OFFICE.

THOMAS A. GRIFFIN, OF CHICAGO, ILLINOIS.

RAIL-BRACE.

SPECIFICATION forming part of Letters Patent No. 721,180, dated February 24, 1903.

Application filed May 7, 1902. Serial No. 106,298. (No model.)

To all whom it may concern:

Be it known that I, THOMAS A. GRIFFIN, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Rail-Braces, of which the following is a specification.

My invention relates more particularly to that type of rail-braces which is formed by forging sections of T-rail to the desired shape.

The object of my invention is to provide such a rail-brace which may be produced with the smallest amount of forging from a section of T-rail as a blank, so as to provide a light yet strong rail-brace, which may be readily fitted to rails of different heights and contours, and which shall be readily adaptable for use under varying conditions, such as with sawed ties or hewed ties with or without a tie-plate, &c.

Another object of my invention is to provide a rail-brace the head of which shall be of such a contour as to have an angle-iron fit between the under side of the head of the rail and the upper side of the flange of the rail to be braced.

These and such other objects as may hereinafter appear are attained by the device shown in the accompanying drawings, in which—

Figure 1 shows a section of a T-rail constituting a blank from which my rail-brace is formed. Fig. 2 shows the same blank after a portion of one flange has been sheared off, this constituting the next step in the formation of my rail-brace. Fig. 3 illustrates the next step in the manufacture of my rail-brace, the head of the rail shown in Fig. 2 having been rolled out into a thin sheet of substantially uniform thickness. Fig. 4 shows the complete rail-brace. Fig. 5 is a detail showing a cross-section on the line 5 5 of Fig. 4 looking in the direction indicated by the arrows. Fig. 6 is an end elevation of one of my rail-braces applied to a T-rail, and Fig. 7 is a similar view showing my improved brace applied over a tie-plate.

Like letters of reference indicate the same parts in the several figures of the drawings.

Referring by letter to the accompanying drawings, A is a section of T-rail of familiar form comprising a head, web, and flanges.

When my brace is manufactured from a section of T-rail, a portion of one of the flanges is sheared off longitudinally, as shown in Fig. 2. The opposite flange and the remaining portion of the flange which has been partially sheared off constitute roughly the head B of my rail-brace. The head of the rail is next rolled out into a thin elongated sheet, as shown in Fig. 3, which by the action of a hammer is formed into the base C and a portion of the neck D of the rail-brace. At the same time a corrugation or hollow rib E is formed in the neck of the rail-brace and extends into its base C. This corrugation in cross-section is substantially in the form of an inverted V, as seen in Fig. 5, and serves the double purpose of lending rigidity to the brace at the point where it is most needed and at the same time furnishing a recess in the under side of the rail-brace, which enables the brace to be readily fitted over spikes which are used to secure the rail or to secure a tie-plate to the tie, as shown in Fig. 7.

It will be observed that with but a few operations I have produced a light, strong, and rigid rail-brace which may be readily fitted to a rail of any size by manually forcing it while hot between the under surface of the head and the top surface of a flange of a typical section of such rail.

The head of my rail-brace may also be made of varying heights by shearing off more or less of the flange of the blank from which the brace is formed, and the neck or base portion of my brace extends effectively to a point adjacent to the under side of the head of the rail, while at the same time extending sufficiently far outwardly from the rail, if desired, to extend over any ordinary tie-plate or the like.

The base of my rail-brace is of sufficient area to permit of a rigid attachment to a tie by means of at least three spikes or the like, while, if desired, my form of rail-brace may be made so as to fit closely adjacent to the flange of the rail, which is braced thereby without interference from the spike-heads securing the rail to the tie, as such spike-heads will come within the pocket in the under side of the rib or corrugation E. Further, with the form of head used in my rail-brace I obtain an angle-iron fit against the under side

of the head and the upper surface of the flange of the rail, as the face of the head of my rail-brace preferably does not come in contact with the web of the rail. The result is
5 that because of the convergence of the under surface of the head of the T-rail and the upper surface of the flange of the T-rail toward each other a rail-brace embodying my invention may be successfully used with rails
10 of varying heights between the flange and head of the rail.

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

15 1. A rail-brace formed from a section of a T-rail having a portion of its base sheared off or cut away, the remainder of said base constituting the head of the brace, a base and a neck or web joining the base to the head, said

neck or web and the base formed from the 20 web and tread of the T-rail section, said neck or web having a recess or pocket in its underneath face, as and for the purpose described.

2. A rail-brace formed from a section of a 25 T-rail having a portion of its base sheared off or cut away, the remainder of said base constituting the head of the brace, and a neck or web and base formed from the web and rolled-out tread of the T-rail section, the said neck 30 or web of the brace being struck up in inverted-V-shape form as and for the purpose described.

THOMAS A. GRIFFIN.

Witnesses:

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