

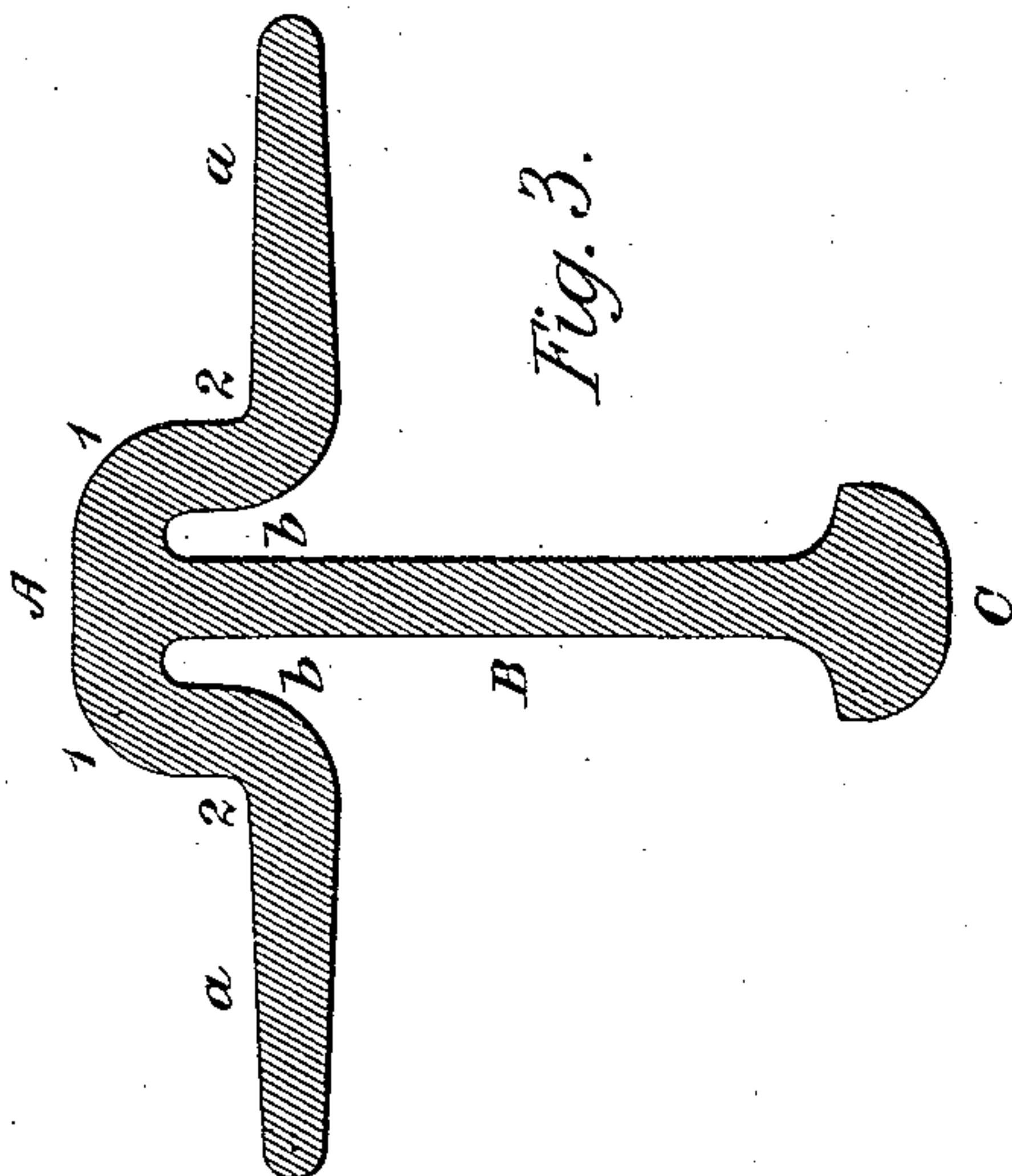
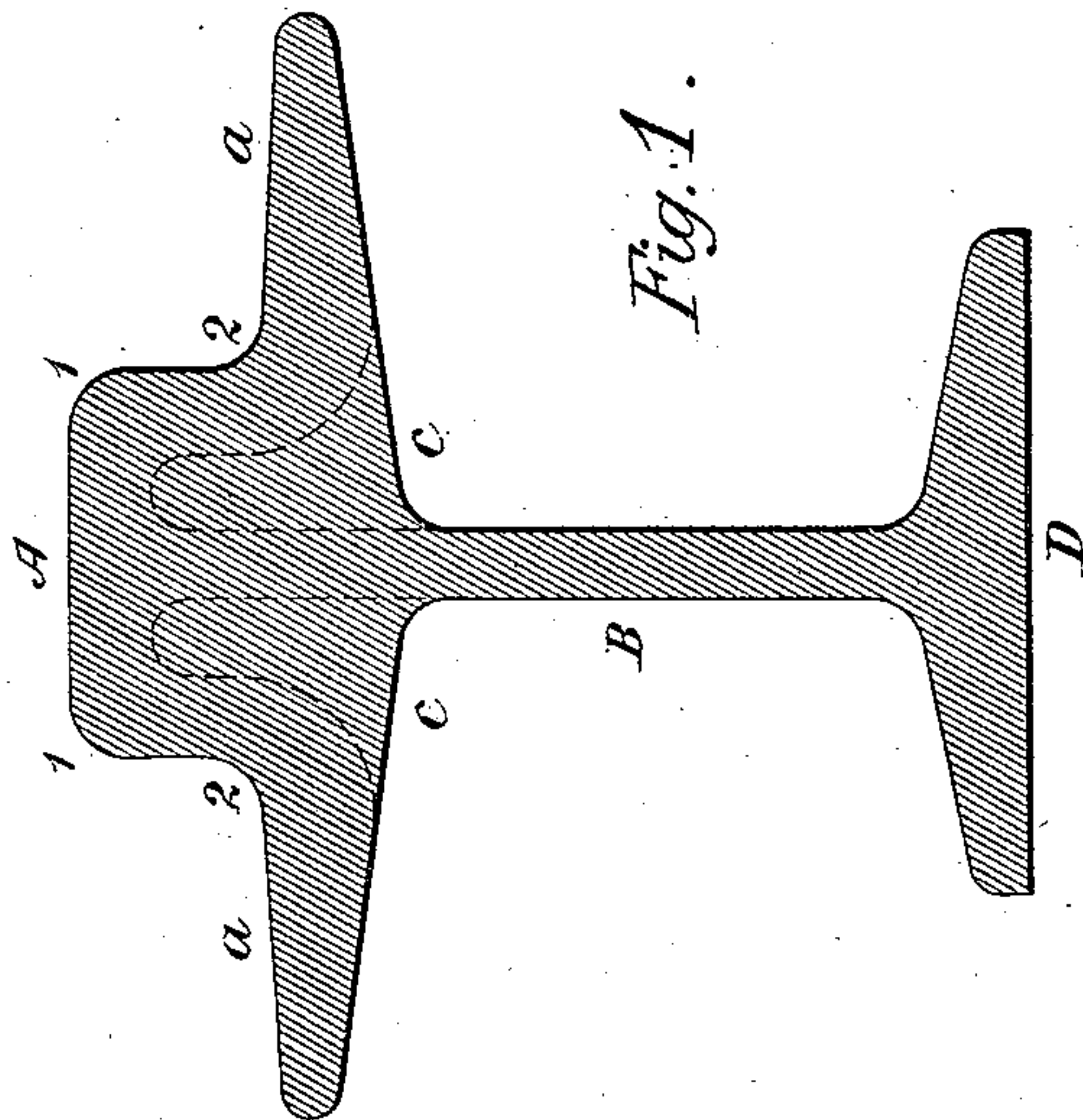
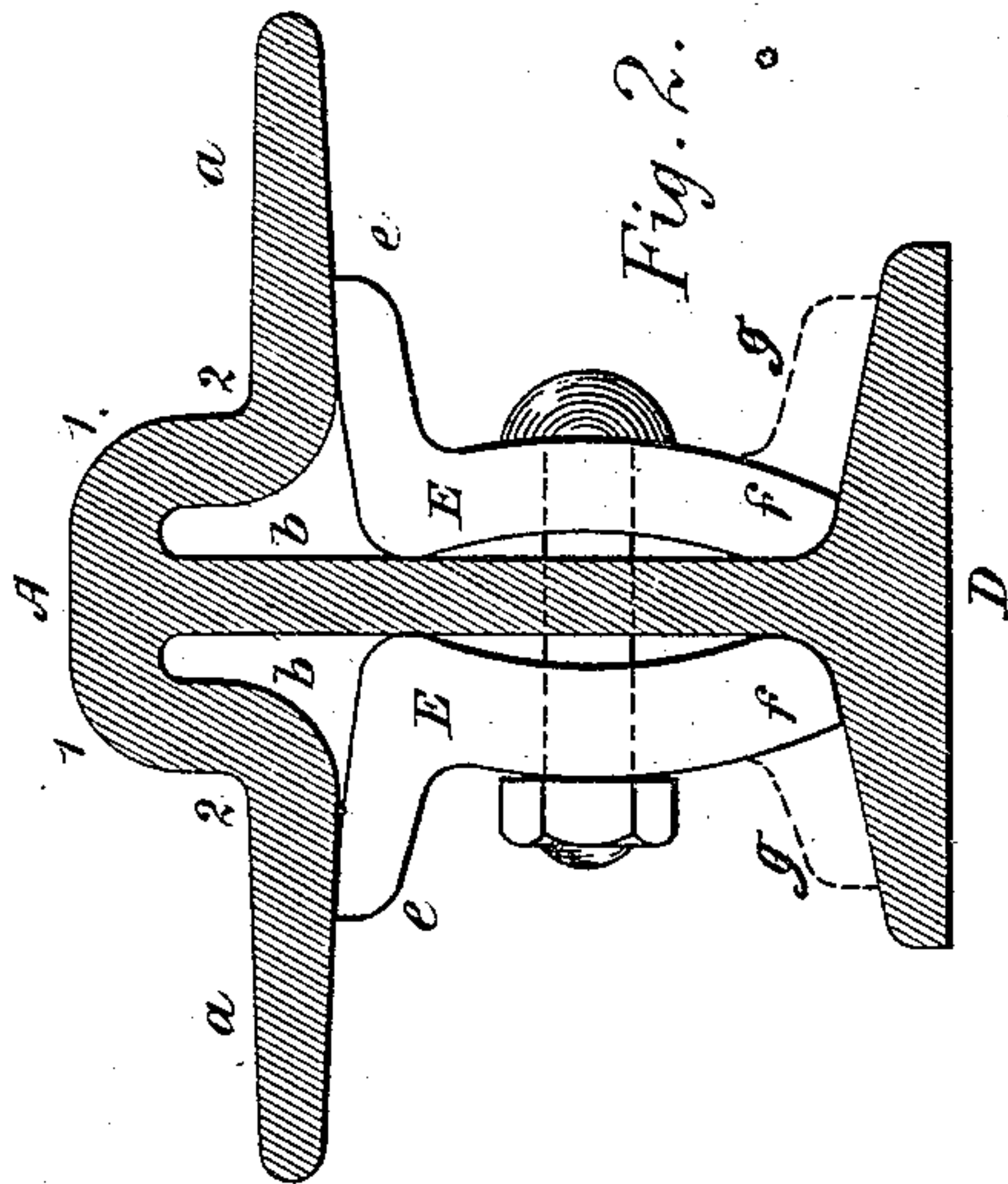
(No Model.)

A. J. MOXHAM.

CENTER BEARING GIRDER RAIL AND SPLICE JOINT.

No. 355,782.

Patented Jan. 11, 1887.



Witnesses
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ARTHUR J. MOXHAM, OF JOHNSTOWN, PENNSYLVANIA.

CENTER-BEARING GIRDER-RAIL AND SPLICE-JOINT.

SPECIFICATION forming part of Letters Patent No. 355,782, dated January 11, 1887.

Application filed September 16, 1886. Serial No. 213,673. (No model.)

To all whom it may concern:

Be it known that I, ARTHUR J. MOXHAM, of Johnstown, in the county of Cambria and State of Pennsylvania, have invented a new and useful Center-Bearing Girder-Rail and Splice-Joint therefor, which invention is fully set forth and illustrated in the following specification and accompanying drawings.

The object of this invention is to dispense with useless metal in the head of the rail and thus to lessen the weight and reduce the cost of such rails, and also to provide a suitable splice-bar joint for such rails.

The invention consists of a rail having a peculiar form of head, as hereinafter described, and set forth in the claims.

It also consists of a rail-joint for making a splice-bar fit under the head of the rail.

In the accompanying drawings, Figure 1 illustrates a center-bearing girder-rail of ordinary type, the dotted lines thereon, marked by the letters *c c*, illustrating change of form, hereinafter described. Fig. 2 illustrates a rail similar in general exterior lines to that illustrated in Fig. 1, but having the surplus or useless metal, as shown at the places marked *b b*, removed. Fig. 3 illustrates a rail of the same form of head as that illustrated in Fig. 2, but the lower portion or foot of whose web is filleted, instead of terminating in a wide flange.

In said figures the several parts are indicated by letters, as hereinafter described.

In the ordinary rail the lower portion of each side tram is continued directly to the web, as shown at *c c* in Fig. 1. The dotted lines in said figure, however, show a certain section or portion of the under part of the head, which contributes nothing to the life or durability of the rail, and which in many cases is not necessary for its stiffness or strength. Such part is displaced by the invention herein described and claimed. This invention, therefore, applies entirely to the head of the rail, and its web and lower portion may be of any of the well-known forms.

It will be noted that the fillets 1 1 on the two edges of the head proper are much more rounded off in Figs. 2 and 3 than in Fig. 1, the ordinary rail. It will also be noted that the fillets 2 2 at the angles formed between the side trams and the head proper are sharper and of smaller radius than is the case with the

ordinary rail. Such conformation facilitates the shaping of the rail in its manufacture. This conformation, however, though considered advantageous, is not positively necessary, for the corners 1 1 could by subsequent roll action be rendered sharper, and, if desired, the fillets 2 2 could be given a more gradual turn, the object of making said parts short, as shown in the drawings, being by a more rigid bend at these points to secure a greater stiffness and rigidity of structure than would otherwise be the case.

In Fig. 2 is shown a form of splice-bar, *E*, which, by the anglesides *ee* on the upper portion of the same, secures a bevel or splice-bar fit against the under part of the trams at points beyond the immediate neighborhood of the web. The lower portion, *ff*, of each splice-bar is of the ordinary shape; but such splice-bars have each their angle portions reversed and placed uppermost, instead of bearing on a lower flange of rail, as is the usual custom with angle splice-bars. By means of this reversal the advantages of a splice-bar fit are maintained, and, if desired, the lower portion of each splice-bar can be similarly formed, as shown by dotted lines *g g*, in order to equalize the bearing when using the rail with a lower flange; as shown in Fig. 2.

The form of rail herein described and claimed can be readily manufactured by rolling in rolls such as are described and claimed in my application No. 213,670, herewith filed.

Having thus fully described my said improvements, as of my invention I claim—

1. As a new article of manufacture, a center-bearing girder-rail having the under part of its head on both sides of its web recessed, as at *b b*, next to the web and between it and its side trams, substantially as and for the purposes set forth.

2. In combination with a center-bearing girder-rail having the under part of its head on both sides of its web recessed, as at *b b*, next to the web and between it and its side trams, splice-bars, as *E E*, shaped substantially as described, and forming splice-joints between contiguous rails, substantially as and for the purposes set forth.

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Witnesses:

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