

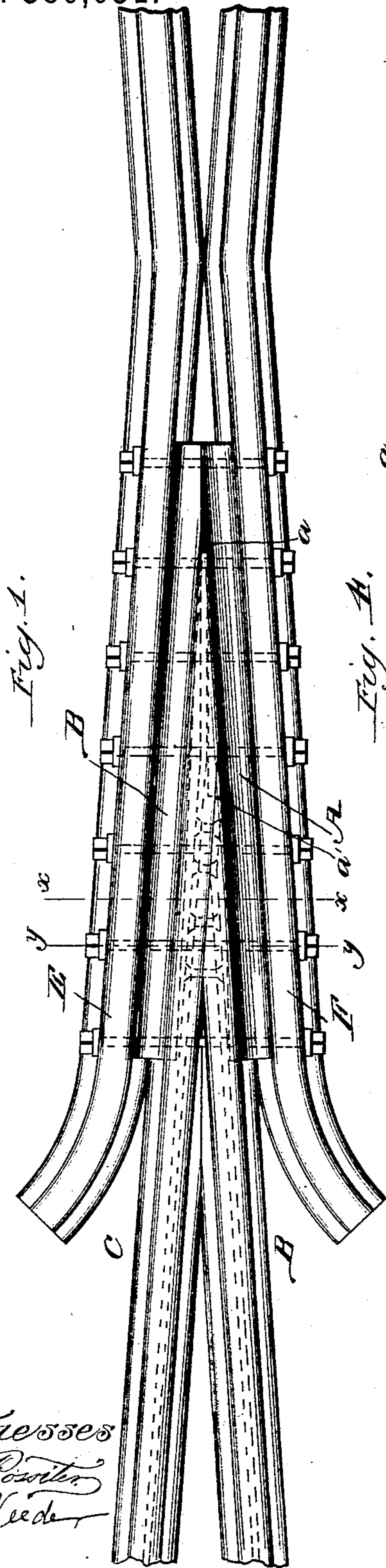
(No Model.)

T. A. GRIFFIN.

FILLING PIECE FOR RAILWAY FROGS.

No. 380,031.

Patented Mar. 27, 1888.



Witnesses
V. Rosser
J. L. Veeder

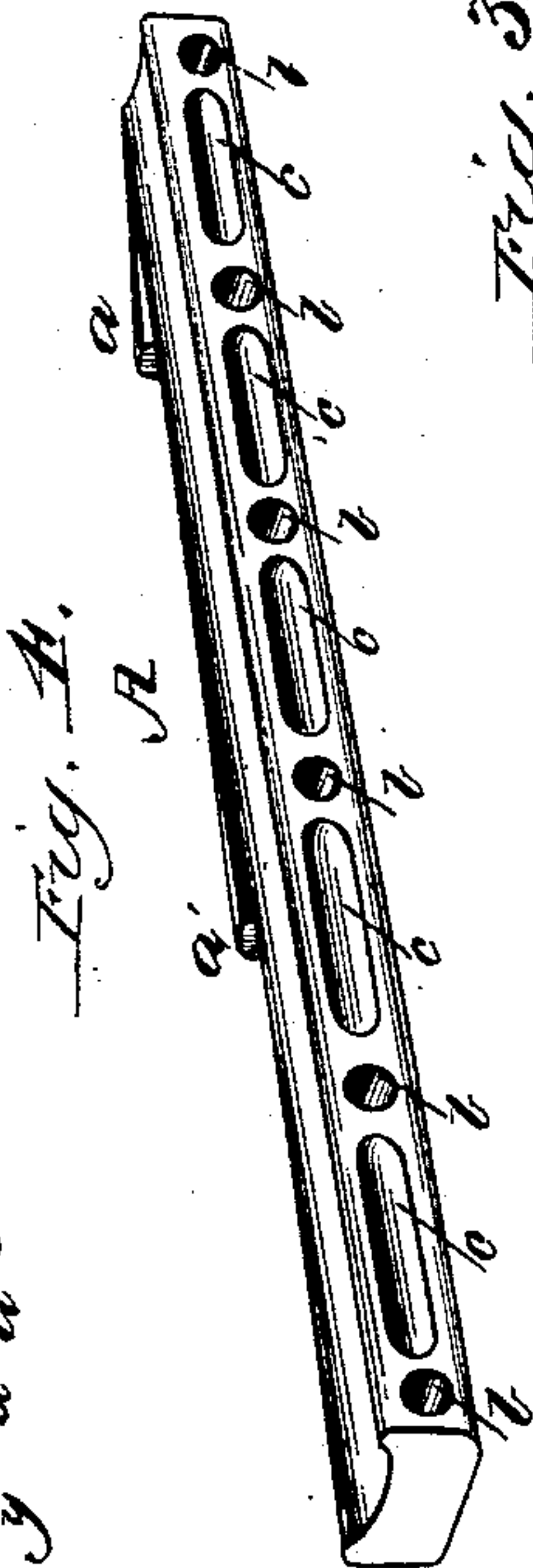
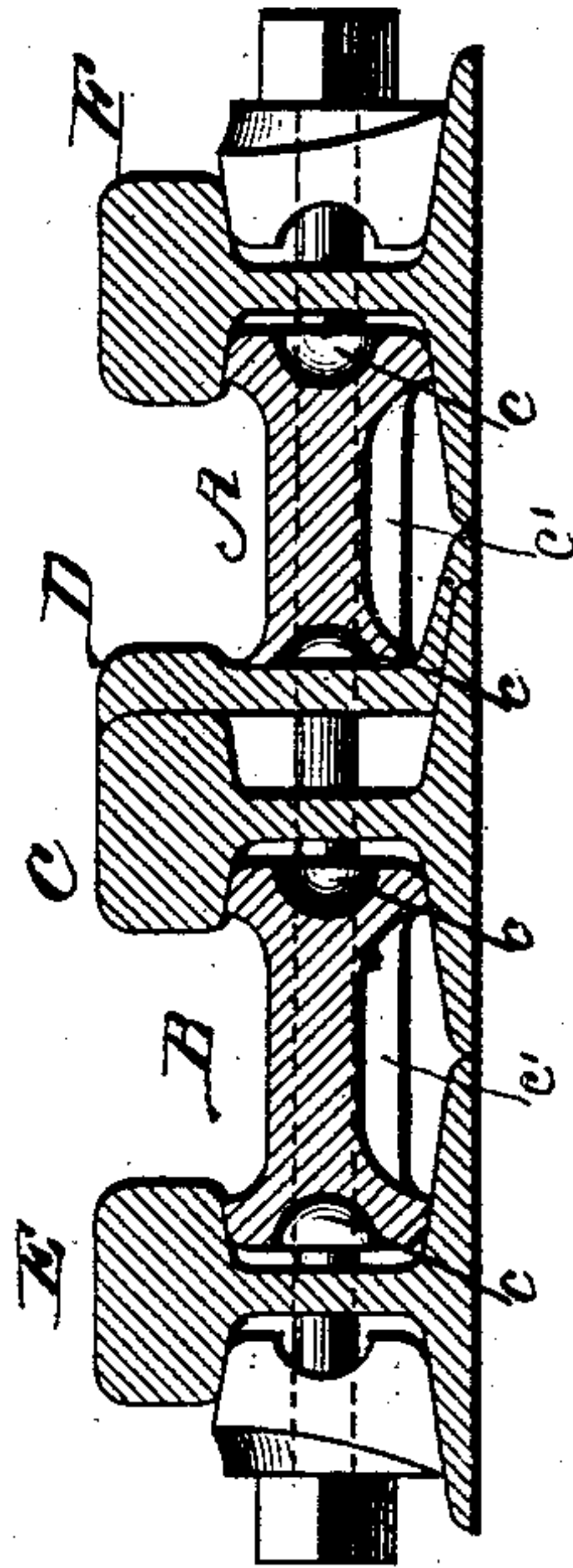
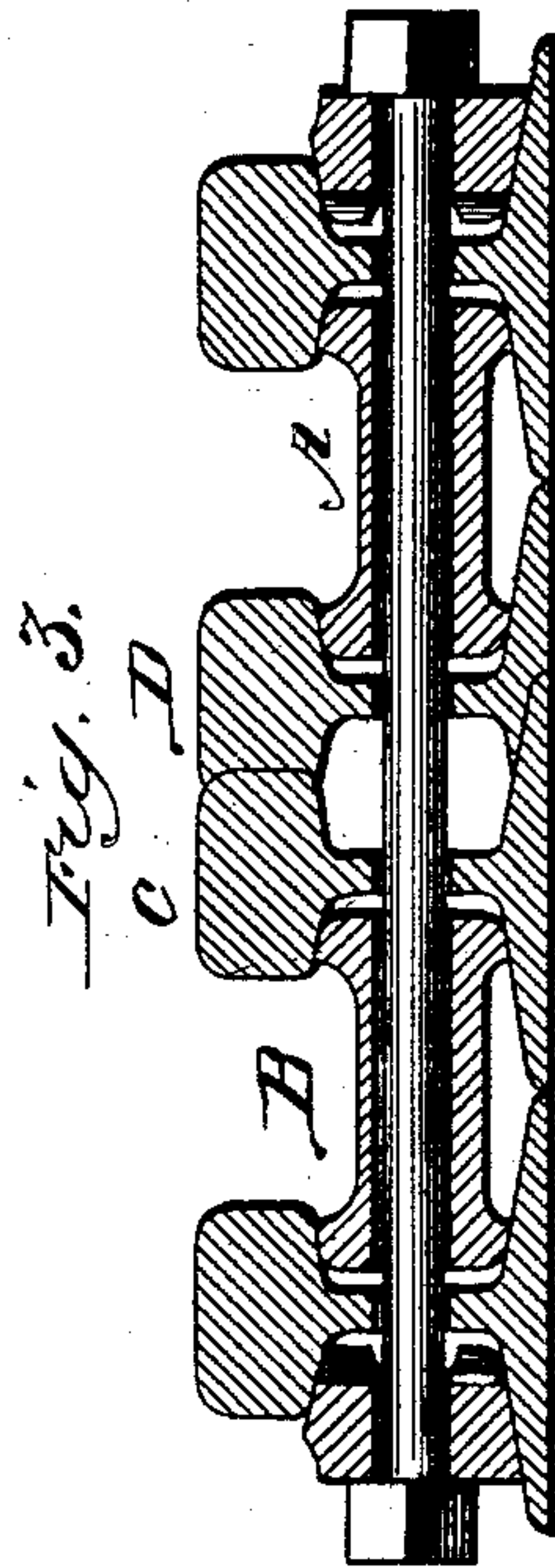


Fig. 2.



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UNITED STATES PATENT OFFICE.

THOMAS A. GRIFFIN, OF CHICAGO, ILLINOIS.

FILLING-PIECE FOR RAILWAY-FROGS.

SPECIFICATION forming part of Letters Patent No. 380,031, dated March 27, 1888.

Application filed November 28, 1887. Serial No. 256,304. (No model.)

To all whom it may concern:

Be it known that I, THOMAS A. GRIFFIN, of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful
5 Improvements in Filling-Pieces for Railway-Frogs, of which the following is a specification.

My invention has for its object the production of a frog-filling which shall be at once
10 strong, light, and cheap, and so close fitting as to give adequate support to every part of the frog, and, further, to economically dispose the metal.

My invention consists in the parts and combinations hereinafter described and claimed.

In the drawings, Figure 1 is a plan view of a frog. Fig. 2 is a cross-section on line *x x*, Fig. 1; and Fig. 3 is a cross-section on line *y y*, Fig. 1. Fig. 4 is a perspective view of one
20 piece of frog-filling.

A and B, Fig. 1, are the frog-filling pieces. C and D are the rails forming the point of the frog, and E F are the wing-rails.

By an inspection of Fig. 1 it will be seen
25 that in order to procure support for the tapering points of rails C and D said rails are bent sidewise and their heads planed on their edges, so as to bring their webs directly under the head of the rails at their points. The bending
30 of the rails C and D makes the space between them and the wing-rails E F varying, so that a straight filling of uniform width will not fit accurately. To produce the required shape in wrought metal is tedious and expensive,
35 while a cast-iron filling is liable to breakage. For these reasons I employ malleable iron as

the material for making the filling, and in order to provide a maximum of strength with a minimum of material I employ the shape shown in Figs. 2, 3, and 4.

By reference to these figures it will be seen that between the bolt-holes *b b* are formed hollows *c c* on the sides and *c'* on the bottom of the filling, the diminution of sectional area corresponding within practical working limits
45 to the diminution of area caused by the bolt-holes, so that a cross-section taken between the bolt-holes would have about the same area as one taken through the adjacent bolt-holes. (*Vide* Figs. 2 and 3.)

Instead of using a solid filling-piece varying in section, my filling-piece is lightened as much between the bolt-holes by the formation of hollows upon the exterior as it is lightened by
50 and at the bolt-holes.

One result of this uniformity of section is that the malleating process takes effect uniformly throughout and is accomplished in less time. The projections *a a'*, which are shown somewhat exaggerated in Fig. 4, fill in the vacancies caused by the termination of the webs
55 of rails C and D.

I claim—

In a railway-frog, the filling-piece of cast metal, in which are formed the bolt-holes *b b*,
60 and the hollows *c c'* between the bolt-holes for preserving a uniform section, as described.

THOMAS A. GRIFFIN.

Witnesses:

P. H. T. MASON,
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