

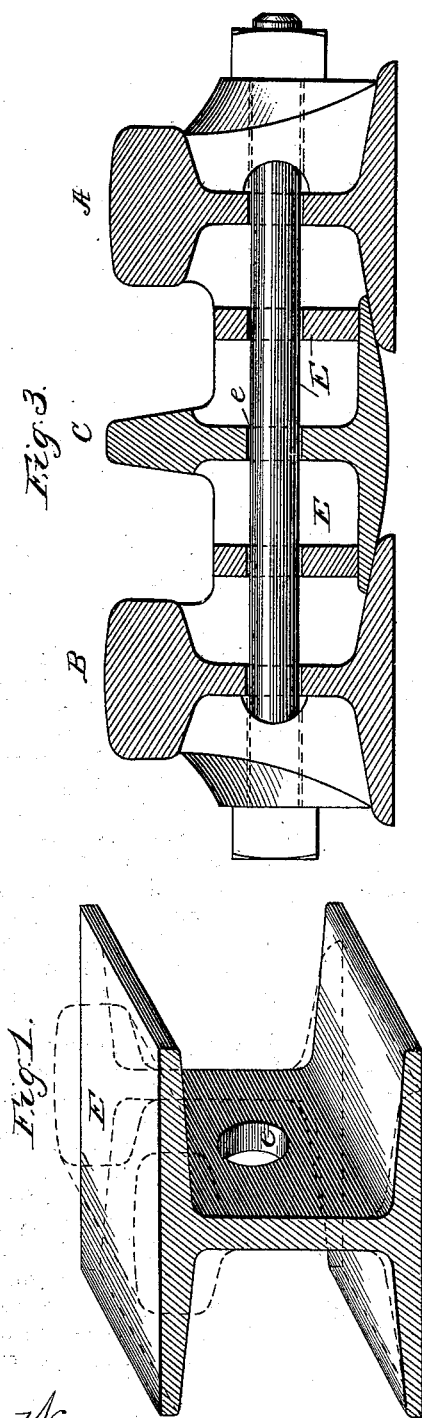
(No Model.)

T. A. GRIFFIN.

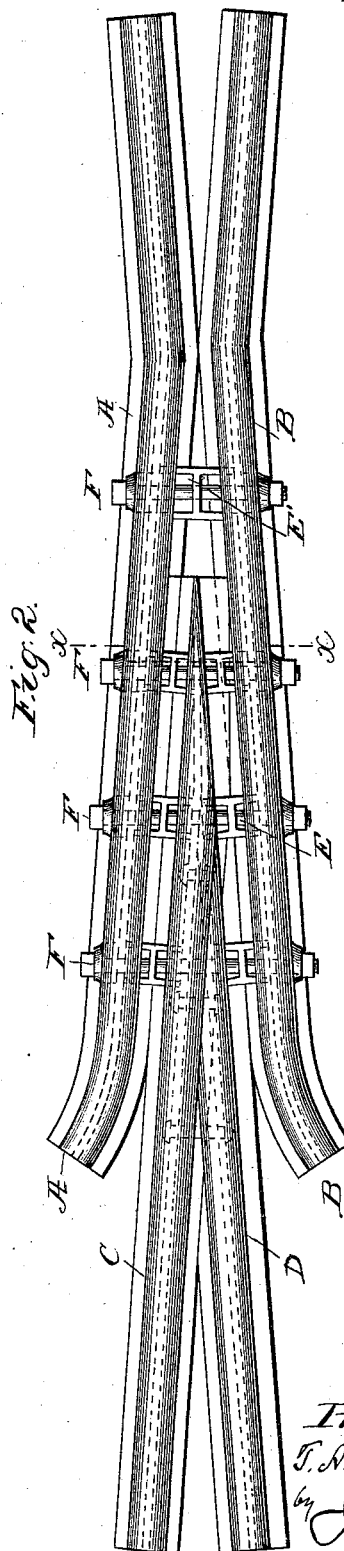
RAILWAY FROG.

No. 384,617.

Patented June 19, 1888.



Witnesses.  
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# UNITED STATES PATENT OFFICE.

THOMAS A. GRIFFIN, OF CHICAGO, ILLINOIS.

## RAILWAY-FROG.

SPECIFICATION forming part of Letters Patent No. 384,617, dated June 19, 1888.

Application filed March 15, 1888. Serial No. 267,223. (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 Railway-Frogs, of which the following is a specification.

My invention relates to frogs made by bolting together properly-shaped sections of rail, and more especially to the filling used in such  
10 frogs for maintaining the side rails in proper relation to the point-rails and to each other.

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

In the accompanying drawings, Figure 1 is  
15 a perspective view of a piece of frog-filling partially completed. Fig. 2 is a plan view of a frog having a filling made in accordance with my invention. Fig. 3 is a section on line *xx*, Fig. 2, showing the outline of the completed  
20 filling.

It may be seen from the drawings that the filling-pieces consist of short pieces *E* of wrought metal (iron or steel) of *I*-section interposed between the side and the wing rails,  
25 *A B C D*, forming the frog at the points through which the bolts *F* pass, the central part of the filling-piece *E* having a hole, *e*, through which the bolts pass.

The dotted lines of Fig. 1 indicate clearly the  
30 method I prefer for making the filling-pieces, as the material utilized by so making them may be more cheaply had than any other available. As will be seen, the filling piece is made by forging or drawing out the head and, if  
35 necessary, the flange of a piece of rail until the shape shown in full lines in Fig. 1 is produced. The forging of the head and flange may be done by swaging in dies or in a number of other ways, such as will occur to the  
40 skilled workman. The hole *e* is now or subsequently drilled or punched, and the edges of the filling-piece are shaped by forging or cutting to conform to the section of the frog-rails, as shown in the cross-section, Fig. 3.

Among the advantages of this frog-filling are 45 its unbreakability, its lightness, and, as a consequence, its cheapness. Each separate piece can be easily fitted with accuracy to the place it is destined to occupy, a quality not attainable in a wrought-metal filling extending the 50 length of the frog.

I claim—

1. In a built-up railway-frog, the filling-piece of *I*-section interposed between the point and wing rails of the frog, the head and foot 55 of said *I*-section each extending transversely from rail to rail and having its edges shaped to fit the rail, as shown and described.

2. In a built-up railway-frog, the filling-piece of *I* section interposed between the point 60 and wing rails of the frog, the head and foot of said *I* section each extending transversely from rail to rail and having its edges shaped to fit the rail, as shown and described, the central part of said *I*-section being placed par- 65 allel to the web of the rails and pierced transversely for the passage of the holding-bolts.

3. In a built-up railway-frog, the wrought-metal filling-pieces of *I* section, formed by forging out the head of a rail-section and fitting 70 the edges of the piece so formed to conform to the rail composing the frog, substantially as described.

4. A railway-frog having filling-pieces of *I* section interposed between the rails compos- 75 ing the frog at the points through which the holding-bolts pass, said filling-pieces being formed by forging out the head of a rail-section and fitting the edges of the piece so formed to conform to the rails composing the frog, 80 substantially as described.

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Witnesses:

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