

(No Model.)

T. GLEASON.

METALLIC RAILWAY TIE.

No. 359,440.

Patented Mar. 15, 1886

Fig. 1

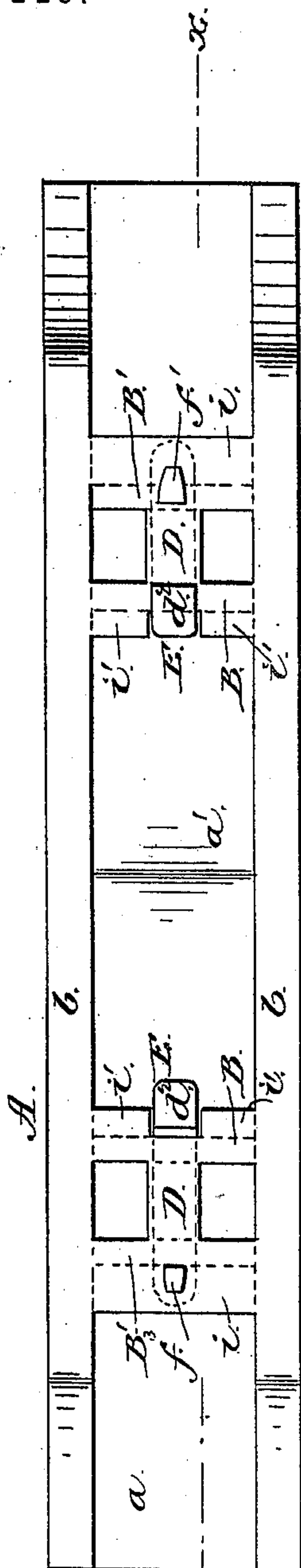
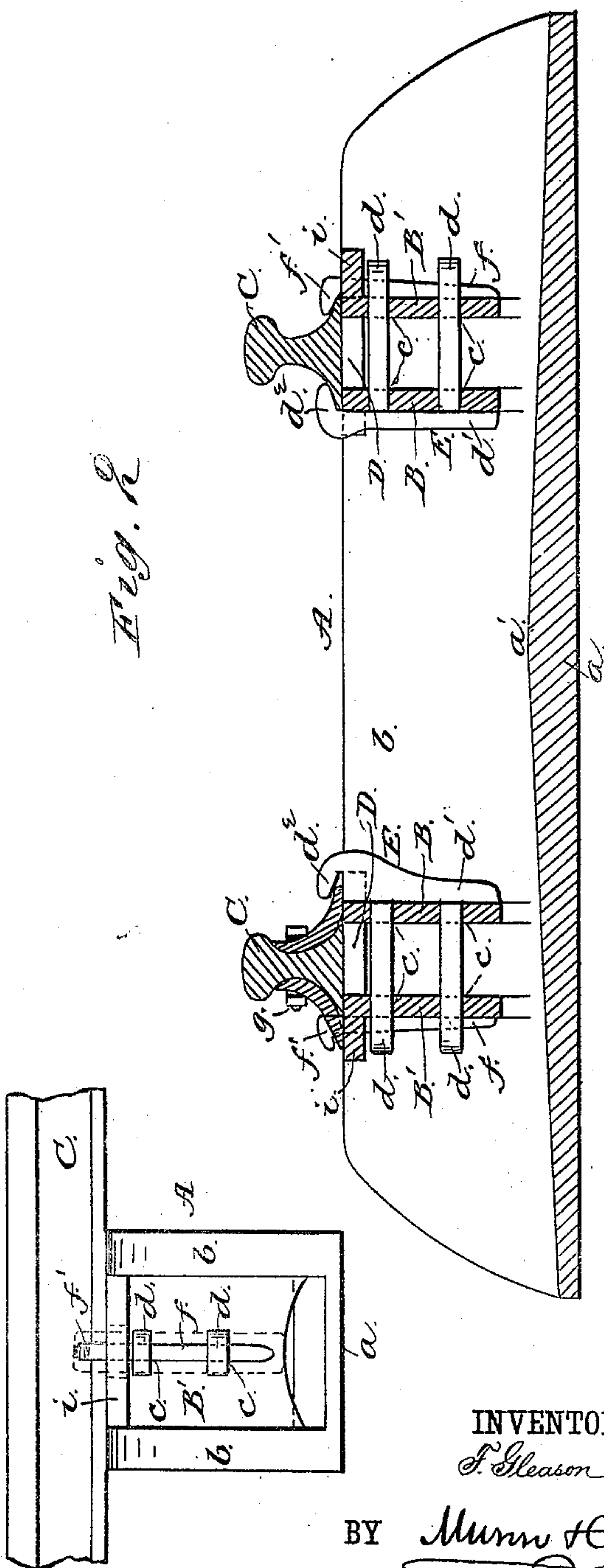


Fig. 2

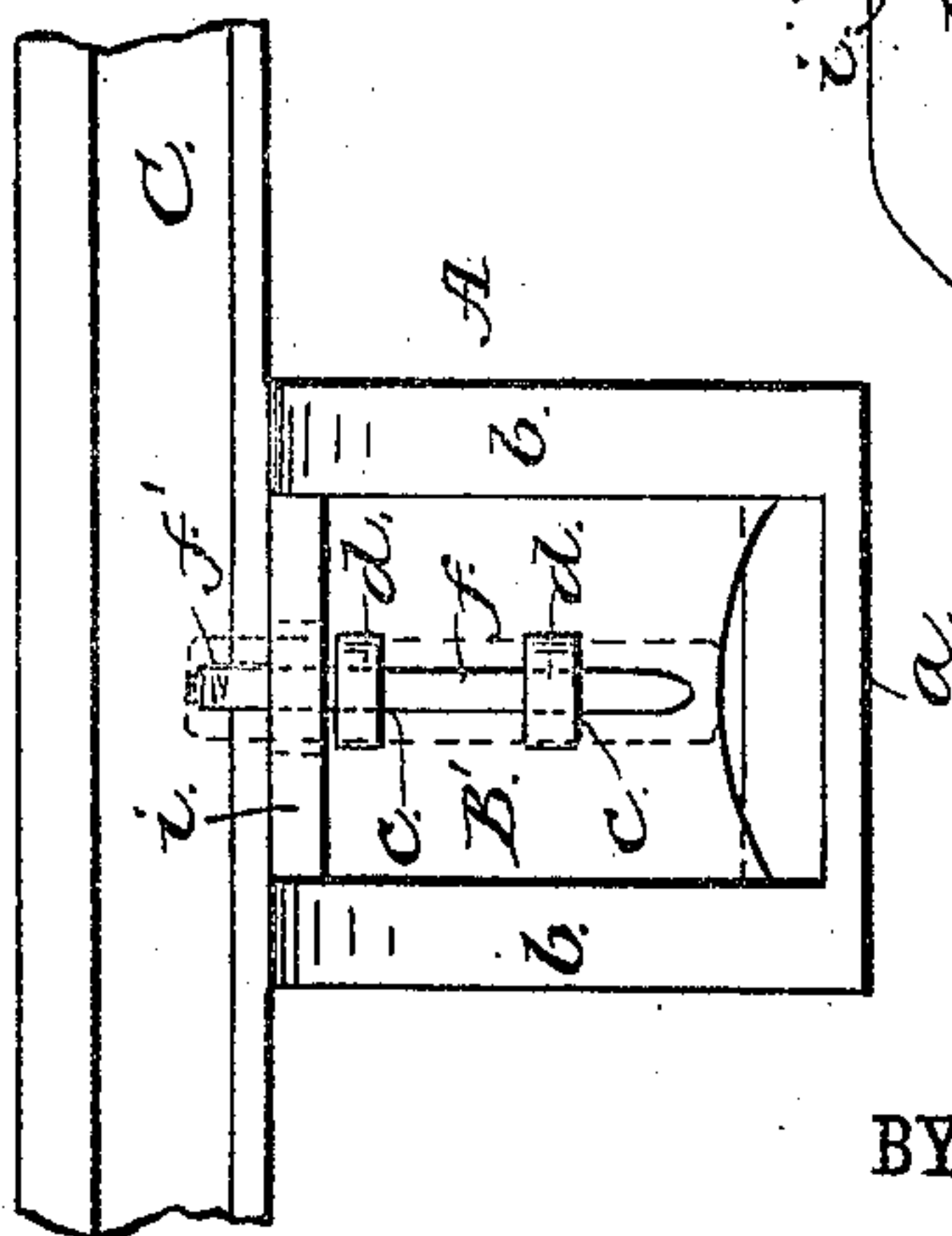


WITNESSES:

C. Neveu

la. Seidgwick

Fig. 3



INVENTOR:

T. Gleason

BY

Munn & Co

ATTORNEYS.

# UNITED STATES PATENT OFFICE.

TIMOTHY GLEASON, OF RED WING, MINNESOTA.

## METALLIC RAILWAY-TIE.

SPECIFICATION forming part of Letters Patent No. 359,440, dated March 15, 1887.

Application filed September 14, 1886. Serial No. 213,496. (No model.)

*To all whom it may concern:*

Be it known that I, TIMOTHY GLEASON, of Red Wing, in the county of Goodhue and State of Minnesota, have invented a new and Improved  
5 Metallic Railway-Tie, of which the following is a full, clear, and exact description.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate  
10 corresponding parts in all the figures.

Figure 1 is a plan view of my metallic railway-tie. Fig. 2 is a longitudinal sectional elevation of the same, taken on the line  $x x$  of Fig. 1, showing the railway-rails in cross-section; and Fig. 3 is an end elevation of the tie  
15 and side view of the rail secured therein.

The invention will first be described in connection with the drawings, and then pointed out in the claims.

20 A represents my new metallic railway-tie cast or otherwise formed in trough shape, with flat bottom  $a$  and parallel vertical side pieces,  $b b$ . The upper surface of the bottom  $a$  is oppositely beveled, or formed with a crown,  $a'$ ,  
25 in the center, from which point the upper surface gradually slopes to the ends of the tie, so that the strength of the tie will be increased and water prevented from standing in the tie. Between the side pieces,  $b b$ , are formed or secured the cross-pieces  $B B'$ , which support the  
30 railway-rails  $C C$ , and between the cross-pieces  $B B'$  are formed the narrow bridge-pieces  $D D$ , which act as braces and also support the rails  $C C$ . The cross-pieces  $B B'$  are  
35 formed with corresponding apertures,  $c c$ , through which the arms  $d d$  of the clamps  $E$  pass, for securing one side of the rails  $C C$  upon the tie. The clamps  $E$  are each composed of the said arms  $d d$  and the headed bar  
40  $d'$ , to which the arms  $d d$  are secured, and which is formed at its upper end with the hook-shaped head  $d''$ . The outer ends of the arms  $d d$  are formed with corresponding openings, through which headed keys or wedges  $f$  are  
45 driven against the outer surfaces of the cross-pieces  $B B'$  for holding the clamps  $E$  and bind-

ing the rails  $C$ , the upper ends of the keys  $f$  being formed with a hook or head,  $f'$ , to engage with the flange of the rail or the fish-plate  
50  $g$ , as shown clearly at the left in Fig. 2.

For supporting the fish-plates and for holding the keys  $f$  in place, I form the cross-pieces  $B'$  with a flange,  $i$ , at the upper edge, through an opening,  $f''$ , in which the keys pass; and to prevent the clamps  $E$  from shifting sidewise I  
55 form the cross-pieces  $B$  with the lugs  $i' i'$ , between which the clamps are held, as shown clearly in Fig. 1.

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

1. A metal railway-tie made trough-shaped and formed with an inclined bottom, substantially as described.
2. The metal railway-tie  $A$ , made trough-  
65 shaped and formed with cross-pieces  $B B'$ , substantially as described.
3. The metal railway-tie  $A$ , formed with cross-pieces  $B B'$ , having corresponding openings,  $c$ , substantially as described.
4. The metal railway-tie  $A$ , formed with the cross-pieces  $B B'$  and center pieces,  $D$ , joining the cross-pieces, substantially as described.
5. The railway-tie  $A$ , formed with the cross-pieces  $B B'$ , having corresponding openings,  $c$ ,  
70 in combination with the clamps  $E$  and keys  $f$ , substantially as described.
6. The railway-tie  $A$ , formed with the cross-pieces  $B B'$ , formed with corresponding openings,  $c$ , in combination with the key  $f$ , and the  
80 clamps  $E$ , formed with the apertured arms  $d$ , substantially as described.
7. The railway-tie  $A$ , formed with the cross-pieces  $B B'$ , the cross-pieces  $B'$  having the apertured flanges  $i$ , and the cross-pieces  $B$  being  
85 formed with the lugs  $i'$ , substantially as and for the purposes set forth.

TIMOTHY GLEASON.

Witnesses:

THOMAS QUILAR,  
S. J. HASLER.