

(No Model.)

2 Sheets—Sheet 1.

J. A. DURVIN.

FROG.

No. 375,613.

Patented Dec. 27, 1887.

Fig. 1.

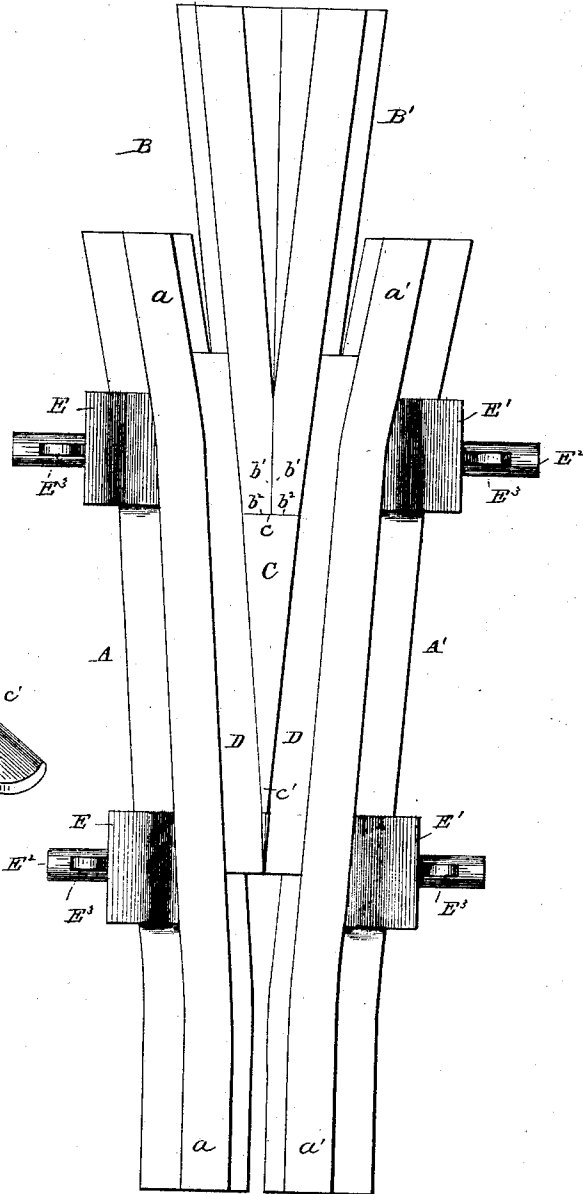


Fig. 3.

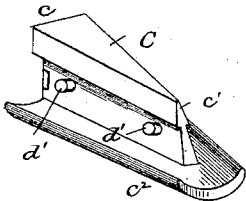
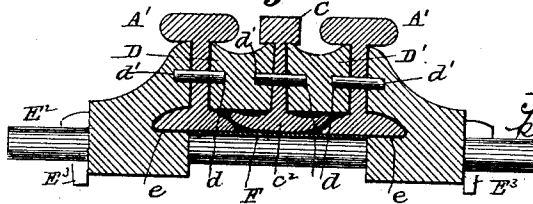


Fig. 2.



Witnesses:

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per

W. H. Haller & Haller

Atty

(No Model.)

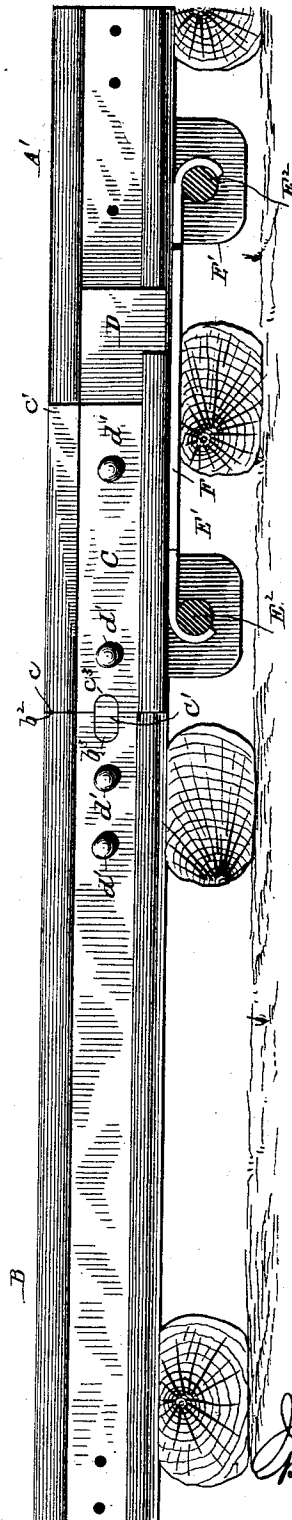
2 Sheets—Sheet 2.

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Fig. 4-



WITNESSES
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UNITED STATES PATENT OFFICE.

JAMES A. DURVIN, OF CLIFTON FORGE, VIRGINIA, ASSIGNOR OF ONE-HALF
TO JOSEPH W. C. BRYANT, OF SAME PLACE.

FROG.

SPECIFICATION forming part of Letters Patent No. 375,613, dated December 27, 1887.

Application filed July 7, 1887. Serial No. 243,663. (No model.)

To all whom it may concern:

Be it known that I, JAMES A. DURVIN, a citizen of the United States, residing at Clifton Forge, in the county of Alleghany and State of Virginia, have invented certain new and useful Improvements in Frogs; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to that class of railway-frogs which are made up of sections of rails; and has for its object the substitution of dowels or steadying-pins for bolts or rivets to make the parts detachable; the use of cuff-rods, cuffs, and keys for clamping the parts together, so that the section foreman can readily adjust the parts and remove any broken or worn-out part and substitute a new part without removing the frog from the rails; the use of side rails having similar angles at each end, so that as one side of the rail becomes worn out it can be reversed and placed upon the opposite side of the frog, and thus prevent the jar upon the end of the tongue, which would be the case if the side rail becomes slightly worn; to use a tongue made in sections, so that instead of inserting a new tongue when the old one becomes worn a section similar to the worn section can be easily and cheaply substituted; to so construct the sections of the frogs that any section can be duplicated without the necessity of removing the frog to the shop; and to utilize old rails, which can be cut up into the desired lengths and be used with slight changes, thus avoiding the expense of furnishing new material for making the frogs.

The invention consists of constructions and combinations, all as will hereinafter be described and claimed, whereby the objects sought for are accomplished, reference being had to the accompanying drawings, in which—

Figure 1 represents a top plan of the frog; Fig. 2, a transverse section; Fig. 3, a perspective of one of the sections of the tongues; and Fig. 4, a side elevation of the frog, with one of the side rails and blocks removed and the cuff-rods in section.

A A' represent the side rails of suitable length, and having each end *a a'* bent at simi-

lar angles, so that they can be used interchangeably on each side; B B', the meeting rails of the tongue, and having their meeting sides *b b'* obliquely planed to have a lateral meeting face and their ends *b²* butt-faced; C, the tongue, which abuts at its rear end, *c*, against the ends *b²* of the meeting rail and tapers gradually to a point, *c'*, and the foot or base *c²* is turned up to rest upon the feet or base of the side rails, A A'. The rear end, *c*, is provided with a recess, *c³*, which registers with a recess, *b³*, in the ends of the meeting rails for the steadying-plate C', which prevents vertical movement of the rear end of the tongue or the front end of the meeting rails.

Between the rails A A' B B' and tongue C are placed the blocks D, having depressions *d* for the dowels or steadying-pins *d'* passing through the rails and tongue, and which prevent longitudinal or vertical movement of the parts. These dowels or pins are provided at proper intervals in the different parts and readily permit of the several parts being separated.

E E' are the cuffs or blocks, provided with depressions *d* for pins *d'*, a groove, *e*, for the toe of the foot or base of the rail, and a transverse opening for the cuff-rods E², which pass through said blocks and under the parts of the frogs, and are secured in place by keys E³, which pass vertically through the rods and clamp all the parts of the frog together.

It is obvious that all the parts of the frog can be readily separated and replaced, and that any part can be taken out without taking apart the whole frog. Resting against the under side of the frog is a plate, F, which holds all the parts beneath it on the same plane and secured in place by passing the ends partly around the cuff-rod and protected from lateral displacement by the cuffs.

What I claim as new is—

1. A frog having the side rails, tongue, meeting rails, blocks, and cuffs connected together by pins, and cuff-rods and keys for clamping the parts together, substantially as described.
2. In a frog, the combination of the meeting rails having the inclined sides and butt-ends, the tongue having a butt-end which contacts with the butt-end of the meeting rail, the side rails, and the blocks, all connected together

by pins and a clamping device, substantially as described.

3. In a frog, the combination of the meeting rails having the inclined sides and butt-end provided with horizontal slot, the tongue having a butt-end provided with a horizontal recess, a steadying-plate in said horizontal recess, the side rails, the blocks, and the clamping devices, substantially as described.

10 4. The combination of a frog made up of sections and in which the tongue is separate from the meeting rails, and a plate extending lengthwise of the frog and beyond the ends of the tongue or point, and supported at its ends

by the cuff-rods of the frog, substantially as 15 described.

5. In a frog, the combination of the side rails, the meeting rails, the removable tongue, the blocks between the side rails and the tongue, and all provided with pins and recesses, and a clamping device, substantially as described. 20

In testimony whereof I affix my signature in presence of two witnesses.

JAS. A. DURVIN.

Witnesses:

GEO. R. BYINGTON,
M. F. HALLECK.