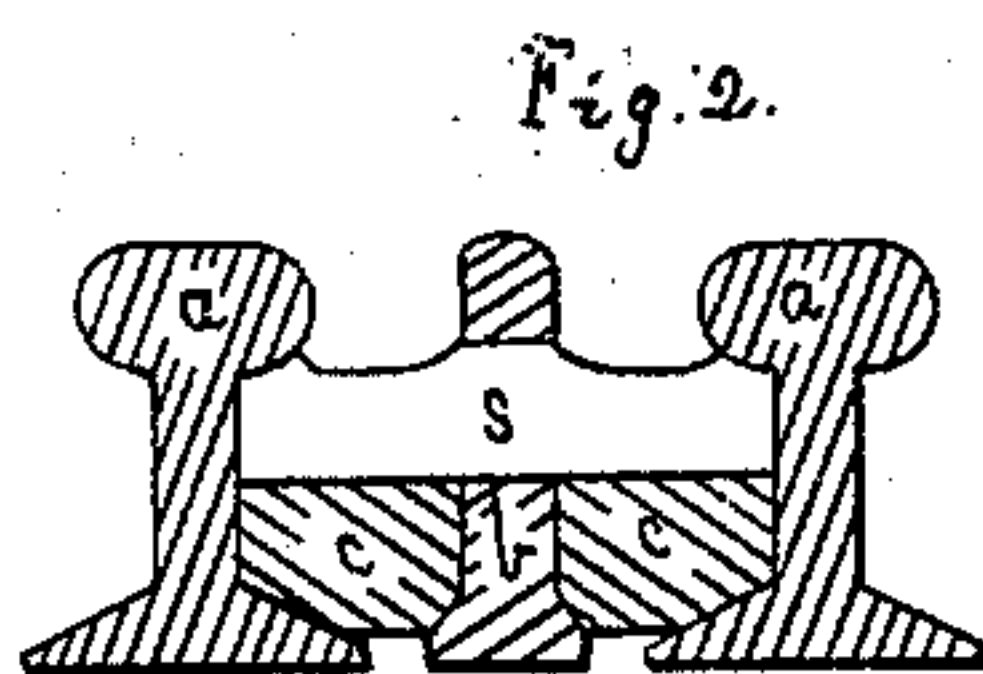
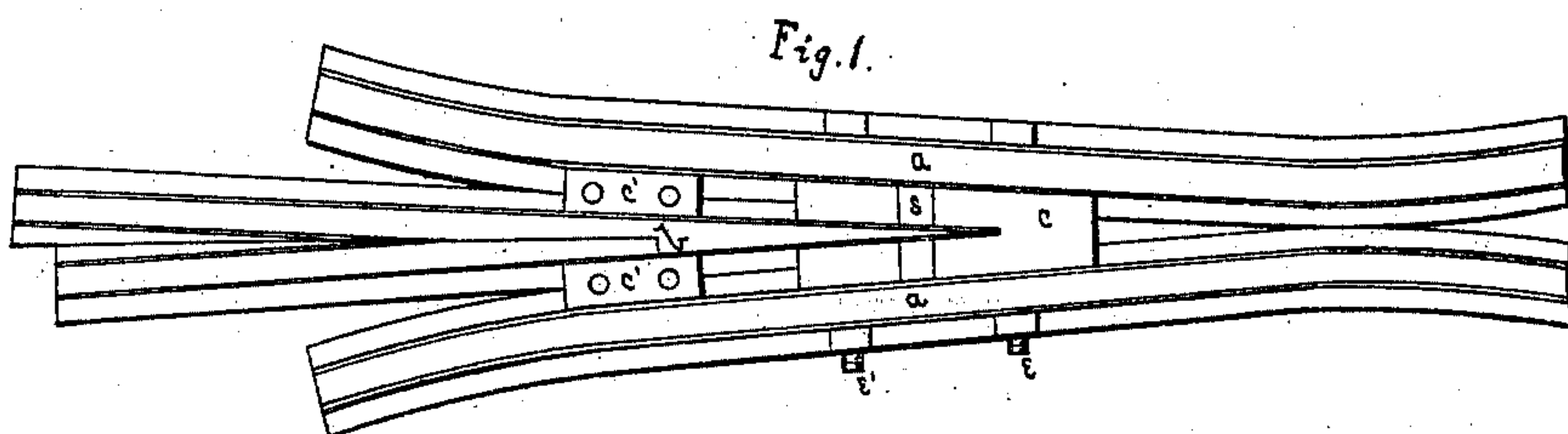


P. HALEY.
Railway-Frog.

No. 216,268.

Patented June 10, 1879.



Witnesses

George F. Robinson
A. D. Knapp

Inventor

Patrick Haley

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UNITED STATES PATENT OFFICE.

PATRICK HALEY, OF ROOTSTOWN, OHIO.

IMPROVEMENT IN RAILWAY-FROGS.

Specification forming part of Letters Patent No. **216,268**, dated June 10, 1879; application filed March 17, 1879.

To all whom it may concern:

Be it known that I, PATRICK HALEY, of Rootstown, Portage county, Ohio, have invented a new and useful Improvement in Railway-Frogs, of which the following is a specification.

The nature and object of my invention is a tongue-block of a single piece, slotted for the tongue to enter, and provided with a key through the tongue, and resting in a groove across the top of the tongue-block, and with its ends under the inside top flanges of the wing-rails.

Figure 1 is a plan. Fig. 2 is a cross-section at the dotted line in Fig. 1.

The tongue-block *c* is of one piece and slotted at one end for the tongue *b* to enter. It is provided with a key, *s*, which passes through tongue *b* and rests in a groove across the top of tongue-block *c*, with the ends of the key in contact with the inner side of wing-rails *a a*, the under side of the top flanges of which are in contact with the top of key *s*. The wing-rails are so curved at their ends as to be reversible and interchangeable. The brace-blocks *c' c'* are bolted to ties between wing-rails *a a* and tongue *b*. The bolts *e e'* hold wing-rails *a a* and tongue *b* together in the ordinary manner, except that bolt *e* passes

through the unslotted end of tongue-block *c* beyond the end of tongue *b*.

The advantages of using key *s* instead of the ordinary screw-bolt to hold the wing-rails and tongue firmly in their relative positions, are that it may be of any suitable size and shape to sustain the strain that it may be subjected to without making holes for it through the wing-rails, and thus weakening them. The downward pressure of trains of cars on tongue *b* is borne by key *s* and tongue-block *c* resting on the bottom flanges of the rails, and as key *s* does not extend through the rails it is not strained or affected by the varying expansion and contraction of the wing-rails and tongue in the heat of summer and cold of winter.

Tongue-block *c* by being solid has its own strength and rigidity, in addition to bolts *e e'*, to sustain the pressure on it.

I claim as my invention—

In a railway-frog, the solid tongue-block *c*, provided with key *s*, extending only to the inner sides of wing-rails *a a*, in combination with the tongue *b* and interchangeable wing-rails *a a*, substantially as described.

PATRICK HALEY.

Witnesses:

BRADFORD HOWLAND,
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