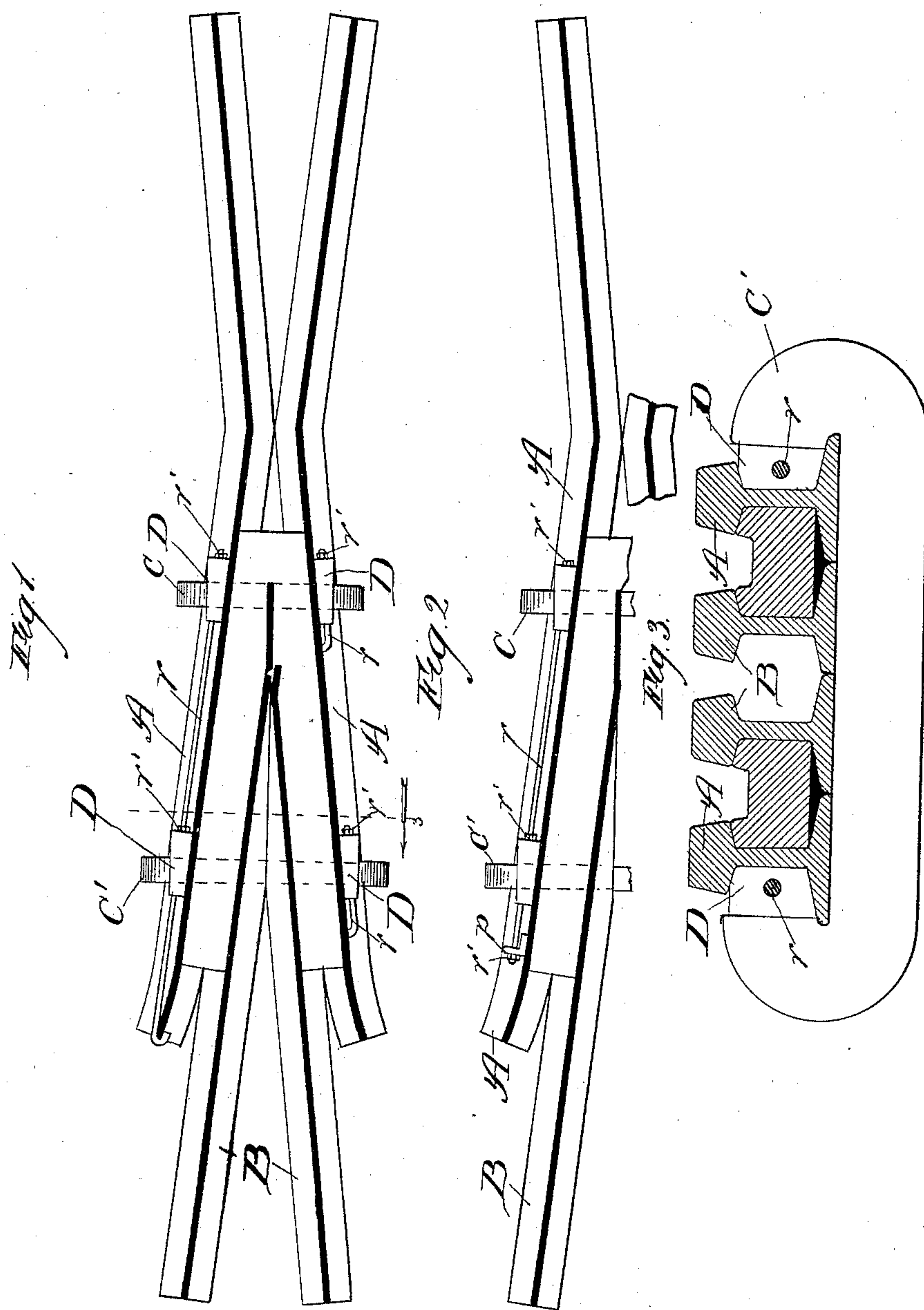


(No Model.)

A. A. STROM.  
RAILWAY FROG.

No. 422,097.

Patented Feb. 25, 1890.



Witnesses:  
Clifford N. White.  
J. H. Dyrenforth.

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# UNITED STATES PATENT OFFICE.

AXEL A. STROM, OF AUSTIN, ASSIGNOR TO THE STROM MANUFACTURING COMPANY, OF CHICAGO, ILLINOIS.

## RAILWAY-FROG.

SPECIFICATION forming part of Letters Patent No. 422,097, dated February 25, 1890.

Application filed November 27, 1889. Serial No. 331,771. (No model.)

*To all whom it may concern:*

Be it known that I, AXEL A. STROM, a citizen of the United States, residing at Austin, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Railway-Frogs, of which the following is a specification.

My invention relates to an improvement in the class of railway-frogs in which the point-rails and the wing-rails are secured together by means of clamps extending transversely across the base of the frog and embracing at their bent or hook-shaped extremities the wing-rails, and which clamps are tightened in place by means of wedges or keys driven between the ends of the clamps and the respectively adjacent sides of the wing-rails.

The object of my improvement is to provide simple but reliably efficacious means for securing the wedges against slipping after having been tightened, and which shall not interfere with driving of the wedges whenever resorted to for tightening purposes, and shall permit ready fastening of the wedges, after being tightened, against withdrawal or slipping.

In the accompanying drawings, Figure 1 is a plan view of a railway-frog having the heads of its rails removed to display my improved fastening means for the wedges, and which means is shown in two forms on the opposite sides of the frog. Fig. 2 is a similar view showing one side of the frog provided with my improvement in a somewhat modified form; and Fig. 3 is a section taken on the line 3 3 of Fig. 1, viewed in the direction of the arrows, and enlarged.

A A denote the wing-rails, B B the point-rails, and C and C' are the clamps, each comprising, as the preferred form for it, a metal bar having its opposite end portions bent edgewise toward each other to embrace the outer flanges of the opposite wing-rails. Between the bent or hook-shaped extremities of the clamps, which are adjusted to embrace the frog, respectively, near its tapering and flaring extremities, are inserted the tapering keys or wedges D.

To secure the wedges when inserted to tighten together the parts of the frog between the clamps, I connect them directly and rigidly

to the wing-rails against withdrawal or slipping.

Means for fastening the wedges to the wing-rails are shown in two forms in Fig. 1, each requiring the wedges to be perforated longitudinally, and one of which connects the wedges together on the same side of the clamp, while the other fastens each wedge separately to a wing-rail. The means first referred to is shown at the left-hand side of the frog in Fig. 1, and comprises a rod *r*, extending longitudinally through both wedges D on that side to the diverted end of the respective wing-rail B, where it is hooked around such diverted end, and adjacent to the wider extremity of each wedge the rod is threaded and provided with a suitable nut *r'* to afford a stop. The other means (shown at the opposite side of the frog in Fig. 1) comprises a rod *r* for each wedge, passed through its longitudinal perforation and fastened to the adjacent wing-rail by being bent substantially into S form toward its extremity protruding beyond the tapering end of the wedge, and there passed through an opening in the web of the wing-rail, the opposite end, protruding beyond the flaring end of the wedge, being provided with a suitable stop, as the nut *r'*. Either means thus described serves to fasten the wedges directly and securely to the wing-rails.

To tighten the parts of the frog together in their original adjustment, or in case of their becoming subsequently loosened, the wedges are driven toward the flaring extremity of the frog, as will be seen, without requiring, to permit such driving, any preparatory manipulation of parts, and when so driven they are effectually stopped against withdrawal or slipping by screwing the nuts *r'* against them.

The form of the fastening means illustrated in Fig. 2 is similar to that shown at the left-hand side in Fig. 1, involving a rod *r*, connecting the perforated wedges and in turn connected to the wing-rail, the difference being in the manner of its connection, by passing it through a perforated lug *p*, extending laterally from the web of the wing-rail and providing it with a nut *r'* on its threaded end and with stops, which may also be in the form of nuts *r'*, adjacent to the flaring ends of the wedges. By this construction the tightening



operation may be readily performed by simply turning the nut  $r'$  adjacent to the lug  $p$ , whereby both wedges are simultaneously wedged into place.

5 What I claim as new, and desire to secure by Letters Patent, is—

10 1. In a railway-frog having its parts held together by clamps  $C$  and  $C'$ , longitudinally-perforated wedges  $D$ , interposed between the clamps and wing-rails and connected directly to the wing-rails by rods  $r$ , extending through the perforated wedges and provided with stops  $r'$ , substantially as described.

15 2. In a railway-frog having its parts held together by clamps  $C$  and  $C'$ , longitudinally-perforated wedges  $D$ , interposed between the clamps and a wing-rail, and a rod  $r$ , fastened at one end to the wing-rail and passing thence

through, and thus connecting both said wedges, and provided with stops  $r'$ , substantially as described. 20

3. In a railway-frog having its parts held together by clamps  $C$  and  $C'$ , longitudinally-perforated wedges  $D$ , interposed between the clamps and a wing-rail, and a rod  $r$ , hooked 25 at one end around the diverted end of the wing-rail and passing thence through, and thus connecting both said wedges, and threaded and provided with nuts  $r'$  near the flaring extremities of the wedges, substantially 30 as described.

AXEL A. STROM.

In presence of—

J. W. DYRENFORTH,

C. H. WHITE.