

(No Model.)

A. A. STROM.

RAILROAD FROG.

No. 374,505.

Patented Dec. 6, 1887.

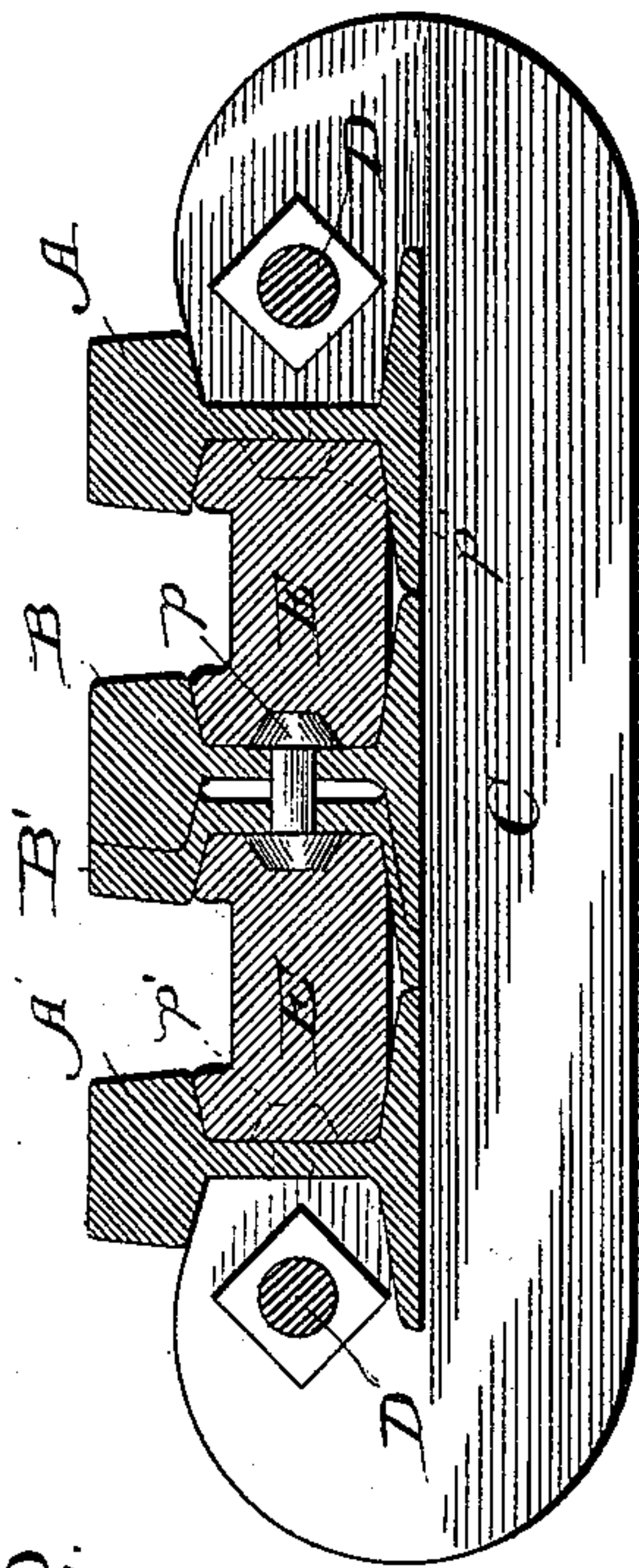


Fig. 2.

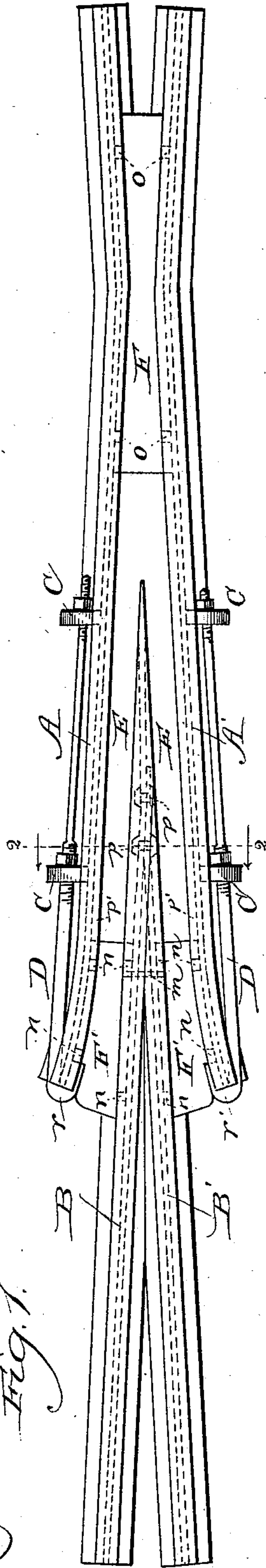


Fig. 1.

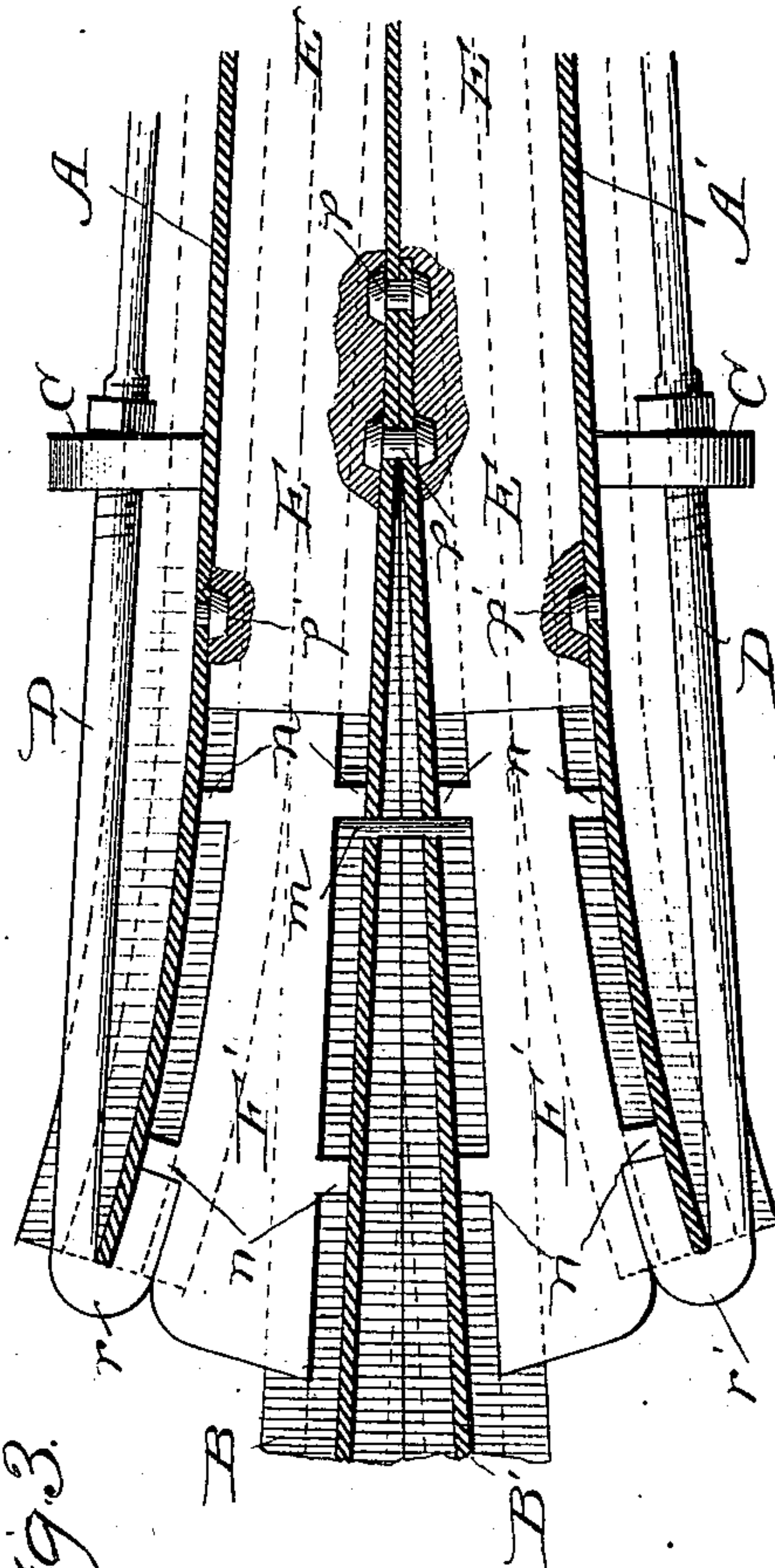


Fig. 3.

Witnesses:
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UNITED STATES PATENT OFFICE.

AXEL A. STROM, OF AUSTIN, ILLINOIS.

RAILROAD-FROG.

SPECIFICATION forming part of Letters Patent No. 374,505, dated December 6, 1887.

Application filed August 22, 1887. Serial No. 247,542. (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
5 invented a new and useful Improvement in Railroad-Frogs, of which the following is a specification.

My invention relates, particularly, to an improvement in the construction of railroad-frogs
10 for which Letters Patent of the United States No. 329,098 were granted to me on the 27th day of October, 1885.

My present improvement does not depart from the feature of the construction set forth
15 in my said former patent—namely, of having the parts secured together by connected clamps adjustable longitudinally upon their connecting medium—but involves additional features and changes in the details of construction,
20 whereby the latter is simplified and the frog generally improved.

My invention consists in having the rods which connect the clamps bent at their extremities around the ends of the wing-rails to
25 prevent longitudinal displacement of the latter.

It further consists in general constructions of the foot-guards; and it also consists in details of construction and combinations of parts,
30 all as hereinafter more fully set forth.

In the drawings, Figure 1 is a plan view of a frog of my improved construction; Fig. 2, a section taken on the line 2 2 of Fig. 1 and viewed in the direction of the arrows; and
35 Fig. 3, a sectional plan view of a portion of the frog as shown in Fig. 1, taken just below the heads of the rails.

A and A' are the wing-rails, and B and B' are the point-rails, sustained in their relative
40 positions by the filling, hereinafter described, and the clamps C, like those set forth in my aforesaid patent, extending transversely underneath the rails to cause the hooked ends to embrace the flanges of the rails A and A'. The
45 tie-rods D, which connect the clamps together in the manner shown, and as described in my said former patent, are bent at their ends adjacent to the more widely-diverging extremities of the wing-rails to produce hooks *r* and
50 *r'*, which fit around the ends of the webs of such rails, and thereby afford the required

purchase to the rods for tightening the clamps upon them. The filling E between the opposite sides of the point-rails and the respective adjacent sides of the wing-rails is held in
55 place and the rails secured to it and longitudinal motion of the parts with relation to each other prevented by headed bolts *p*, passed through the point-rails to hold them together, and having their heads, on opposite sides,
60 countersunk into the respectively adjacent fillings E, and by headed bolts *p'*, passed through the webs of the wing-rails, and the ends of the shanks of which are preferably flush, as shown, with the outer surfaces of the webs, the heads
65 being countersunk into the opposite sides of the fillings.

F is the foot-guard between the wing-rails toward one extremity thereof. I form this foot-guard of metal, preferably in a continuous
70 piece, and since it is required, obviously, to fill in the space only of the width between the heads of the rails, to save material I make it of a width which causes it to fit such space, and provide lugs *o* at opposite sides to abut
75 against the webs of the rails and rest on the flanges. As the foot-guard F is made flaring in opposite directions, to conform to the space it has to fill, it is secured in its position on adjusting the wing-rails in making the frog. I
80 also provide foot-guards F' at the opposite end of the wing-rails, of a form to fit a space substantially corresponding with that between the adjacent sides of the heads of the latter and of the point-rails, and provide them likewise with
85 lateral lugs *n*, to form bearings against the rail-flanges and webs, as in the case of the lugs on the foot-guard F. The ends of the hooks *r* and *r'* on the rods D abut against the lugs *n*
90 nearest to them, and thus prevent longitudinal displacement of the parts F', though, in case I do not employ the hooked rods for the purpose described—and these are not indispensable—the foot-guards F' may be held from
95 displacement by a rod, *m*, passed transversely through the point-rails, as shown, and extending at opposite ends beyond the latter below the lugs *n* farthest from the extremity of the point-rails, to cause the lugs to abut against the projecting ends of the rod.
100

While the construction with the rod *m* and that with the hooks *r* and *r'* may form alterna-

tive constructions, they may be used together to advantage, since both afford greater strength than either alone.

I do not limit myself to the exact construction of details thus described and illustrated, since these may be modified without departing from the spirit of my invention.

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

10 1. In a railroad-frog having its parts secured together with connected clamps adjustable longitudinally upon their connecting medium, the combination, with the wing-rails, of rods D, connecting the clamps and bent at corresponding ends against the adjacent ends of the wing-rails, substantially as described.

20 2. In a railroad-frog, the combination, with the wing-rails, of a foot-guard, F, flaring toward opposite ends, and of a width to correspond, substantially, with the space between the heads of the wing-rails, and provided with lateral lugs *o*, substantially as and for the purpose set forth.

25 3. In a railroad-frog, the combination, with the wing-rails, of a foot-guard, F, formed in one continuous piece flaring toward opposite ends, and of a width to correspond, substantially, with the space between the heads of the wing-rails, and provided with lateral lugs *o*, substantially as and for the purpose set forth.

30 4. In a railroad-frog, the combination, with the wing and point rails, of foot-guards F', of a width to correspond, substantially, with the space between opposite sides of the heads of

the point-rails and the adjacent sides of the heads of the wing-rails secured in place, and provided with lateral lugs *n*, substantially as and for the purpose set forth. 35

5. In a railroad-frog, the combination, with the wing and point rails, of foot-guards F', of a width to correspond, substantially, with the space between opposite sides of the heads of the point-rails and the adjacent sides of the heads of the wing-rails, and provided with lateral lugs *n*, and a rod, *m*, passed through the point-rails to abut at its ends against lugs *n*, substantially as and for the purpose set forth. 45

6. In a railroad-frog having its parts secured together with connected clamps adjustable longitudinally upon their connecting medium, the combination, with the wing and point rails, of rods D, connecting the clamps and bent at corresponding ends around the adjacent ends of the wing-rails, foot-guards F', of a width corresponding, substantially, with the space between opposite sides of the heads of the point-rails and the adjacent sides of the heads of the wing-rails, and provided toward one end with a pair of lateral lugs, *n*, abutting against the bent ends of the rods D, and a rod, *m*, passed through the point-rails to abut at its ends against a pair of lugs, *n*, toward the opposite end of the said foot-guards, substantially as described. 50

AXEL A. STROM.

In presence of—

J. W. DYRENFORTH,
CHAS. E. GAYLORD.