

(No Model.)

A. A. STROM.

COMBINED TIE BAR AND SLIDE PLATE FOR RAILROAD TRACKS.

No. 450,983.

Patented Apr. 21, 1891.

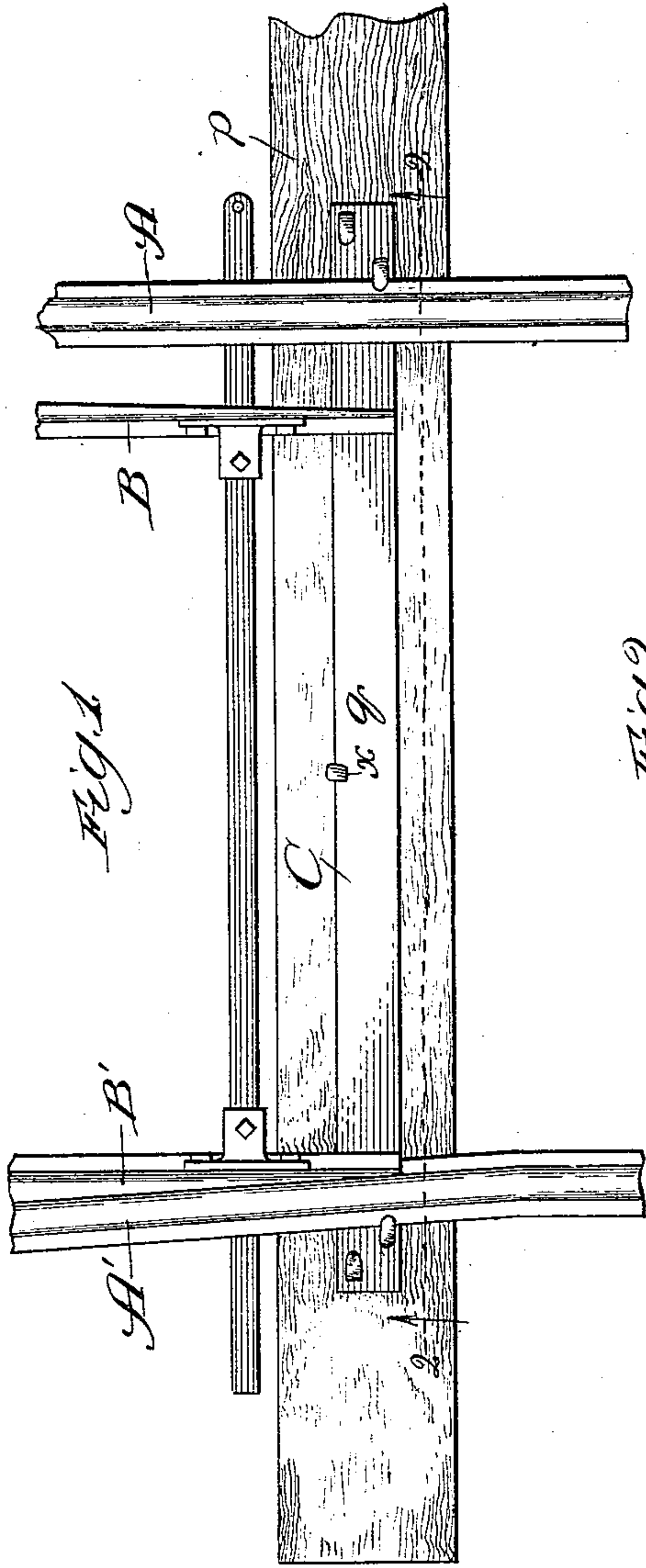


Fig. 1.

Fig. 2.

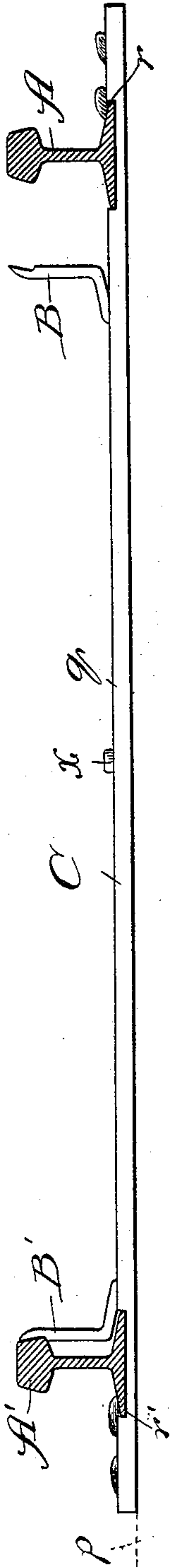
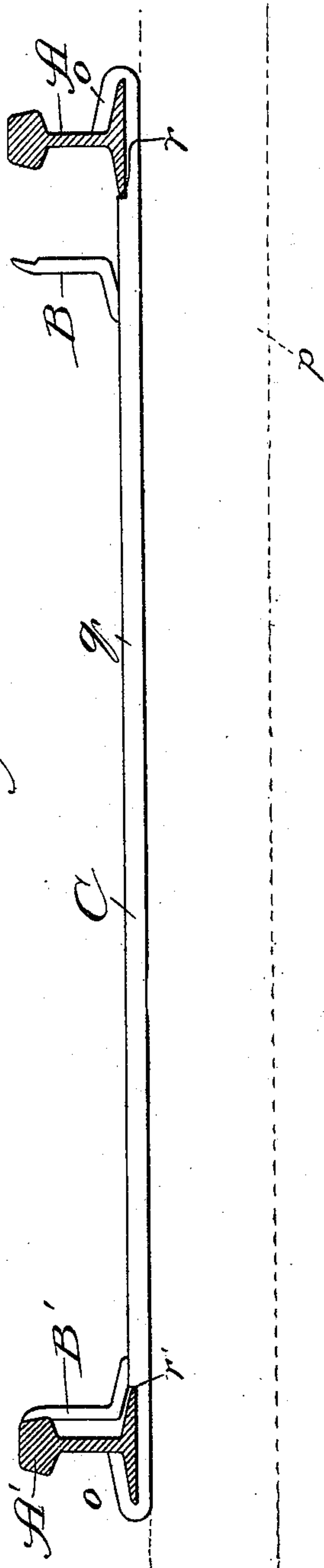


Fig. 3.



Witnesses:
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UNITED STATES PATENT OFFICE.

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COMBINED TIE-BAR AND SLIDE-PLATE FOR RAILROAD-TRACKS.

SPECIFICATION forming part of Letters Patent No. 450,983, dated April 21, 1891.

Application filed November 24, 1890. Serial No. 372,438. (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 new and useful Improvements in Combined Tie-Bars and Slide-Plates for Railroad-Tracks, of which the following is a specification.

The maintenance of the gage on the main rails in a railroad-track, while important throughout the same, is particularly so at curves and switches, and at these points it is especially difficult to maintain the gage by reason of the abnormal strain there exerted by passing trains. At the switches it is customary to provide slide-plates for the switch-rails near their points. The slide-plates afford anti-friction bearings for the point-rails and extend under the bases of the main rails, which rest on them below the planes of the switch-rails and are commonly held, to tend to prevent them from lateral displacement under the strain, by braces applied to their outer sides and also by the spikes securing the slide-plates near their outer ends to the ties or head-block.

The construction of slide-plate referred to as being commonly employed by reason of its operating to hold the main rails separately or independently against lateral displacement only tends to maintain the gage in the sense of preventing such separate lateral displacement of the respective main rails; but it does not tend to do so in the real sense of maintaining their relative positions.

The object of my improvement is to provide means, in lieu of the common slide-plates, of which a separate one is used for each main rail, which shall prevent spreading of the main rails by precluding the lateral displacement of one without entailing that of the other in the same direction, thereby insuring the desired maintenance of the gage notwithstanding such lateral displacement, the occurrence of which, with only the separate bracing means referred to, obviously impairs the gage.

To accomplish my object I connect the slide-plates, thereby adapting them to perform the additional function of a tie-bar for the main rails, or if the connecting medium is

not to be used at a switch the parts so connected may be surface-plates for the bases of the main rails connected together. I furthermore adapt the connected slide-plate device the better to serve my purpose by details in the construction of my improvement and combinations of parts, all as hereinafter more fully set forth.

In the accompanying drawings, Figure 1 shows by a broken plan view my improvement applied in a railroad-track at a split switch. Fig. 2 is a section taken on the line 2 2 of Fig. 1, viewed in the direction of the arrows and showing my improved device in elevation, operatively applied, but with the head-block removed. Fig. 3 is a view like that presented in Fig. 2, but showing a modified construction of my improved device, and which also serves to represent it in the form of connected, so-called, "surface-plates" for the main rails.

A and A' are the main rails of a railroad-track, and B and B' are the switch-rails.

C is my improved combined tie-bar and slide-plates device, which involves a continuous bar *q*, having recesses *r* and *r'* in its upper side respectively near its opposite ends, forming seats for and for confining the main rails, the upper surface of the bar between the seats *r* and *r'* being thereby raised above them and affording the sliding surfaces at the desired elevations, with relation to the main-rail flanges, for the switch-rails.

It will be remembered that in the ordinary construction of slide-plate the portion thereof on which the switch-rail moves is in the form of a plate welded on or otherwise secured to the base on which the main rail rests to raise the sliding surface for the switch-rail to the desired elevation with relation to the adjacent main-rail flange. My improved construction affording the desired relative elevations of the switch-rail and main-rail seats is the more readily produced and operates the more effectively in confining the main rails at their bases.

As will readily be seen, if with my improvement the strain exerted by a passing train be sufficient to displace laterally one main rail the other, owing to the connection, must follow it, thereby maintaining the gage; but

with my improvement in operative position the resistance to such displacement is obviously increased quite materially by the connecting function the bar q exerts upon the
5 main rails.

Of course were the strain sufficient or so exerted against a main rail as to bend the tie-bar q the gage would be impaired; but to prevent the bending of the bar, which could only
10 take place in a vertical direction, I extend the device C along and support it upon the upper side of a tie or a head-block p , to which it is firmly secured either by the means for fastening and bracing the main rails on the ties
15 or by additional fastening means, including a spike α , or more than one spike, between the fastened ends. Hence the supporting of the device on the upper side of the tie or head-block forms a very important feature of my
20 improvement as a medium for connecting the main rails. Besides, it prevents sinking of the rail-flanges into the tie.

If desired, the device C may be bent upward at its opposite ends, as shown at o in
25 Fig. 3, to overlap the outer flanges of the main rails. This modification may be used to insure the following of a seat r or r' by the main rail it supports in case of sinking or depression of the tie.

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

1. A combined tie-bar and slide-plates device C, comprising a bar q to extend between

the main rails of a railroad-track and having
recesses r and r' near its opposite ends to form
35 seats for the main rails below the bases of the switch-rails, in combination with a tie or head-block p , on which the device C is supported, substantially as and for the purpose set forth.

2. In combination with a railroad-switch, a
40 combined tie-bar and slide-plates device C near the points of the switch-rails on a tie or head-block p , and comprising a bar q , having recesses r and r' near its opposite ends, forming
45 seats for and confining the main rails, the said bar extending between and connecting the said main rails and supporting the switch-rails adjacent to the inner ends of and on a plane above the bases of the recesses, substantially as and for the purpose set forth. 50

3. In combination with a railroad-switch and a tie or head-block p thereof, the combined tie-bar and slide-plates device C, comprising a bar q , having recesses r and r' near
55 its opposite ends and supported on the upper side of the said tie or head-block near the points of the switch-rails, the main rails seated in the said recesses and connected together by the device C, and the point-rails supported
60 on the bar q adjacent to the inner ends of the recesses on a plane above their bases, substantially as and for the purpose set forth.

AXEL A. STROM.

In presence of—

J. W. DYRENFORTH,
M. J. FROST.