

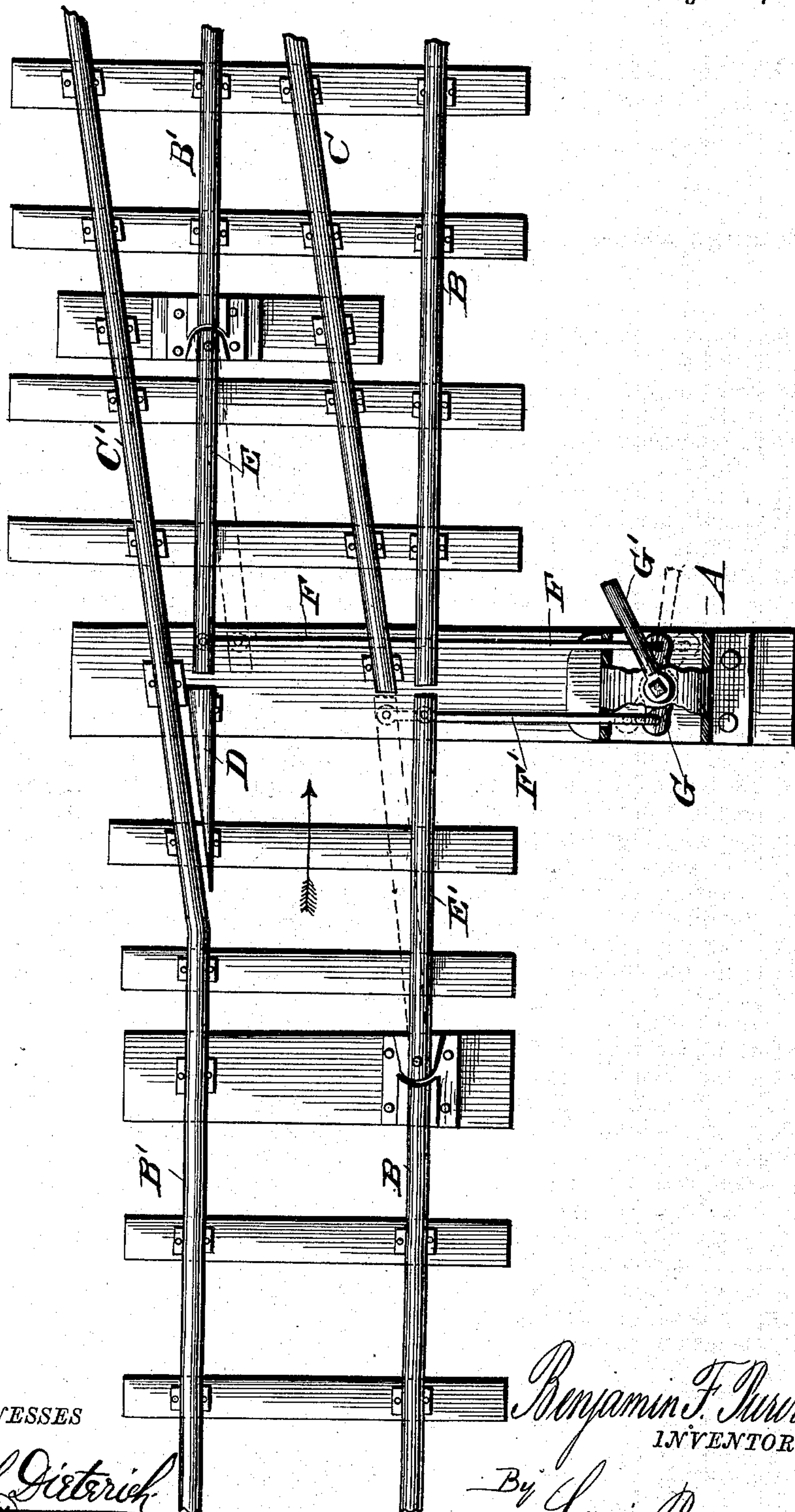
(No Model.)

B. F. PURVIANCE.

AUTOMATIC RAILROAD SWITCH.

No. 322,395.

Patented July 14, 1885.



WITNESSES

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UNITED STATES PATENT OFFICE.

BENJAMIN FRANKLIN PURVIANCE, OF KEOKUK, IOWA, ASSIGNOR OF
ONE-HALF TO C. HILLS, OF SAME PLACE.

AUTOMATIC RAILROAD-SWITCH.

SPECIFICATION forming part of Letters Patent No. 322,395, dated July 14, 1885.

Application filed May 22, 1885. (No model.)

To all whom it may concern:

Be it known that I, BENJAMIN F. PURVIANCE, of Keokuk, in the county of Lee and State of Iowa, have invented certain new and useful Improvements in Automatic Railroad-Switches; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawing, which forms a part of this specification.

My invention relates to that class of railroad-switches known as "automatic" railroad-switches; and it consists in certain new and useful improvements on the invention for which I have made application for Letters Patent of the United States, Serial No. 125,901, having for their objects greater simplicity of construction and increased efficiency in operation, these objects being attained by the improved construction and arrangement of parts, which will be hereinafter fully described, and particularly pointed out in the claim.

Referring to the annexed drawing, the figure is a top plan view of my improved automatic railroad-switch.

Referring to the several parts by letter, A represents the switch-stand, and B B' the stationary rails of the main line, the rail B' of the same being bent or curved outward at a point a little in advance of the switch-stand, where it connects with the outer rail, C', of the side track. At the point where the main rail B' is thus curved outward is placed a frog, D, of ordinary construction, the said frog being secured in such a position, as shown, that when a train is passing over the main line the wheels on that side of the same will pass from the main line over the said frog, and thence upon the main line again, when the short movable rails are in the position shown in the drawing.

E E' indicate the short movable rails, which form a part of the main-line rails B and B', and are arranged diagonally opposite each other, as shown in the drawing, the free ends of these movable short rails being connected by the draw-bars F F' to the two ends of the bell-crank G, secured upon the switch-stand A,

and provided with the operating-handle G', for the purpose hereinafter set forth.

When the bell-crank is turned by the operating-handle of the same into the position shown in dotted lines of the drawing, it will operate to move the short movable rails in reverse directions, the left-hand movable rail, E', being thrown in line with the inner rail of the side track, thereby enabling a train approaching in the direction of the arrow to run upon the side track, or a train from the side track to run out upon the main line, the other short movable rail, E, being swung inward out of line of the frog D.

When a train approaches in either direction over the main line, and the switch is open, as shown in dotted lines, to put the side track in communication with the main line the wheel-flanges will strike against one of the said short movable rails (according to which direction the train is moving) and move the same in line with its main rail, the other movable rail being operated through the bell-crank and draw-bars by the said movable rail to automatically swing it in line with its respective main-line track, the said movable rails being of such a short length that there will be no difficulty in their being operated by the locomotive.

When the movable rails are swung in line with the rails of the side track, and it is desired to have the train pass from the main line off upon the side track, it is of course necessary for the switchman to retain hold of the operating handle or lever G', thereby holding the movable rails in this position, and preventing the wheels of the locomotive from automatically closing the side tracks by throwing the movable rails in line with the main rails, as before described.

From the foregoing description, taken in connection with the accompanying drawing, the arrangement and operation of my improved automatic safety-switch will be readily understood, without requiring further explanation.

It will be seen that it is impossible for the train to run off upon the side track (unless the switch is deliberately held for that especial purpose) or into the open switch, as the train itself operates to automatically bring the

movable rails in line with the main rails, no matter from which direction the train may be approaching over the main-line tracks.

My improved switch is peculiarly simple in construction and entirely devoid of all complicated mechanism, which is liable to break or get out of order.

Having thus described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

The combination, with the main rails and side track, of the short movable rails, arranged as described, and adapted to be oper-

ated automatically by the wheels of the locomotive, the frog, and the draw-bars and bell-crank, having the operating lever or handle, all arranged to operate in the manner and for the purpose shown and set forth. 15

In testimony that I claim the foregoing as my own, I have hereunto affixed my signature in presence of two witnesses. 20

BENJAMIN FRANKLIN PURVIANCE.

Witnesses:

DANIEL TISDALE,
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