

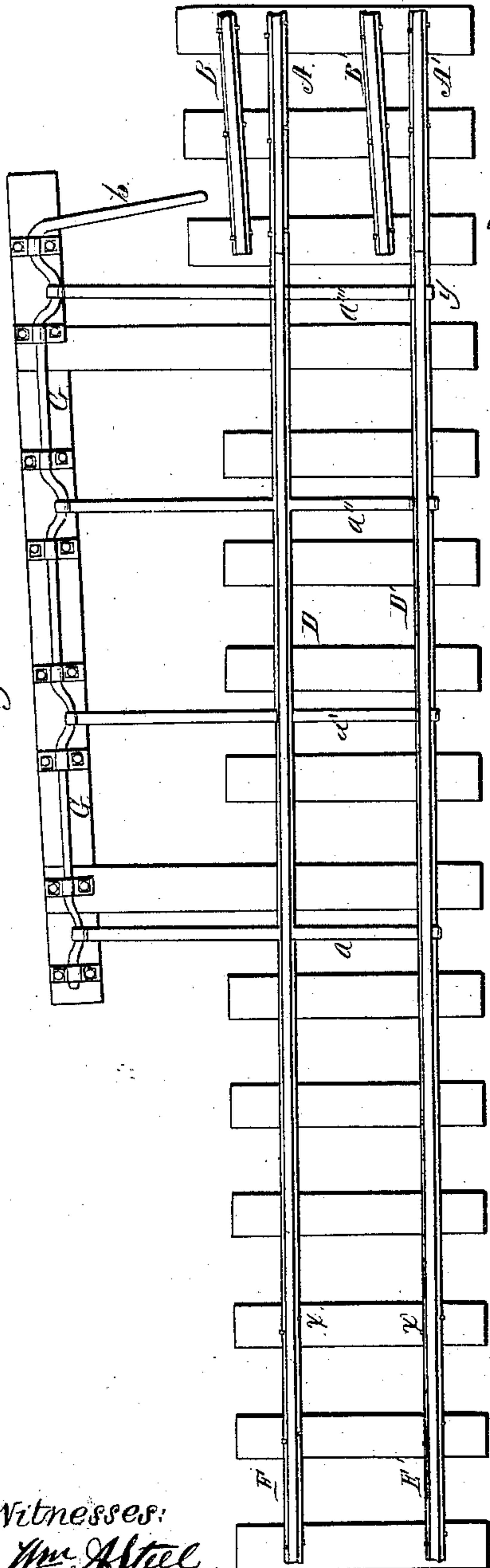
W. Wharton, Jr.,

Railroad Switch,

No 78,500,

Patented June 2, 1868.

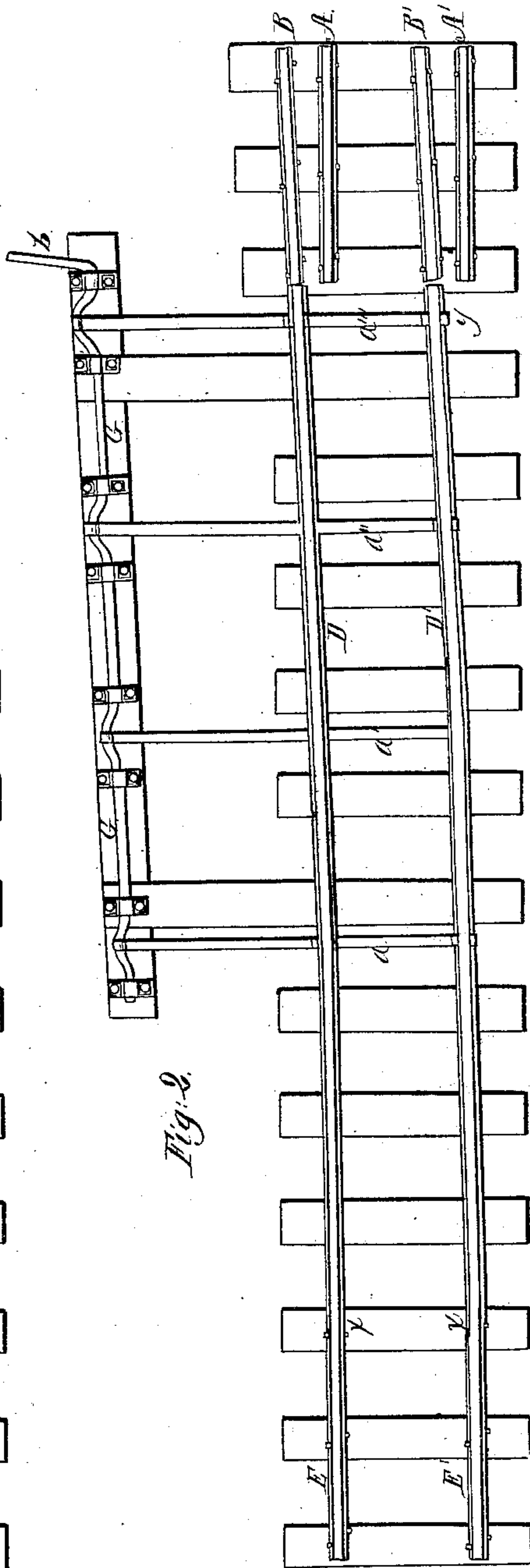
Fig. 1.



Witnesses:

Wm. Steel,
John Parker

Fig. 2.



Inventor:

Wm. Wharton, Jr.

United States Patent Office.

WILLIAM WHARTON, JR., OF PHILADELPHIA, PENNSYLVANIA.

Letters Patent No. 78,500, dated June 2, 1868.

IMPROVED RAILWAY-SWITCH.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, WILLIAM WHARTON, Jr., of Philadelphia, Pennsylvania, have invented an Improvement in Operating Railroad-Switches; and I do hereby declare the following to be a full, clear, and exact description of the same.

My invention consists of switch-rails arranged to move laterally from a fixed point, in combination with a shaft having two or more graduated cranks, or their equivalents, for serving the twofold purpose of operating and laterally steadying at different points the said switch-rails, substantially as set forth hereafter.

In order to enable others skilled in the art to make and apply my invention, I will now proceed to describe its construction and operation, reference being had to the accompanying drawing, which forms a part of this specification, and in which—

Figures 1 and 2 are plan views of a railroad-switch with my improvements.

A and A' represent the permanent rails of a main track, and B and B' those of a turn-out.

D and D' are the switch-rails, which may either form continuations of the rails E and E', or may be separate rails jointed to the track. In the present instance these switch-rails are shown as continuations of the permanent rails E and E', but are free to move laterally from the point *x*, where they are held to the track, so that in moving the switch-rails dependence is placed upon their lateral elasticity.

In operating these switch-rails, the force required to move them has been heretofore applied at one point only, that is near their outer ends, say at the point *y*, so that from this point to the point *x*, where they are secured to the track, the switch-rails are at liberty to yield to the lateral strains to which they may be subjected by passing engines and cars, and these strains are in many cases very severe.

In order to obviate this evil, the force for moving the switch-rails is in my improvement applied thereto at two or more points, through the medium of cranks, or equivalent devices, which serve the purpose of steadying the rails laterally after they have been moved to their proper position.

In the present instance, and as shown in the drawing, the switch-rails are connected together at four points by rods *a a' a'' a'''*, each rod being continued outwards to one of the cranks of a shaft, G, which is arranged to turn in suitable bearings secured to a foundation at a short distance from the track, and which is provided at one end with an operating-lever, *b*.

In place of making each rod, *a a'*, &c., in one continuous piece from the crank to the rails, and across the same, ordinary connecting-rods, embracing the cranks at one end, and jointed to the rails or their cross-bars at the other, may be used, in a manner too well understood by those familiar with the construction and operation of switches to need description.

It will be seen that the cranks of the shaft G are graduated in accordance with the extent of movement which each crank has to impart to that portion of the switch-rails to which it is connected. Thus, of the four cranks shown in the drawing, that connected with the switch-rails nearest the outer ends of the same must have the greatest throw, and that for imparting a movement to the rails farthest from their outer ends, the least throw, the intermediate cranks having proportionate graduations.

It will be evident to those familiar with the construction and operation of switches, that cams, eccentrics, &c., may, by graduating their movements, be used in place of the shaft with graduated cranks for operating the switch-rails from a number of points simultaneously. I prefer the cranks, however, partly on account of their simplicity, but more especially because they can be arranged to assume a horizontal position, both when the switch-rails coincide with those of the main track, and when they coincide with those of the turn-out, as shown in the drawing, this being the best position for the cranks to assume for resisting the lateral strain imparted to the rails.

I claim as my invention, and desire to secure by Letters Patent—

Switch-rails, arranged to move laterally from a fixed point, in combination with a shaft having two or more graduated cranks, or their equivalents, for serving the twofold purpose of operating and laterally steadying at different points the said switch-rails, substantially as set forth.

In testimony whereof, I have signed my name to this specification in the presence of two subscribing witnesses.

WM. WHARTON, JR.

Witnesses: -

JOHN WHITE,

HARRY SMITH.