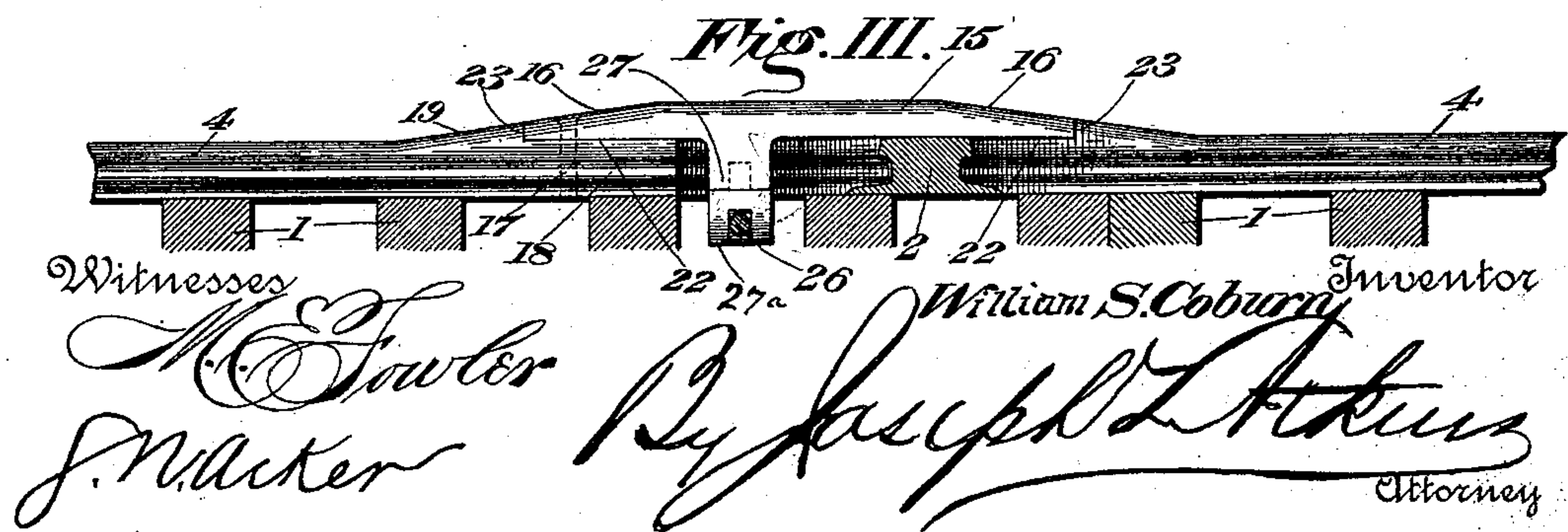


W. S. COBURN.  
RAILWAY SWITCH.

Patented May 21, 1895.





# UNITED STATES PATENT OFFICE.

WILLIAM S. COBURN, OF SAVANNAH, GEORGIA, ASSIGNOR OF ONE-FOURTH  
TO T. F. JOHNSON, OF SAME PLACE.

## RAILWAY-SWITCH.

SPECIFICATION forming part of Letters Patent No. 539,575, dated May 21, 1895.

Application filed October 15, 1894. Serial No. 525,930. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM S. COBURN, of Savannah, county of Chatham, State of Georgia, have invented certain new and useful Improvements in Railway-Switches, of which the following is a specification, reference being had to the accompanying drawings.

The object of my invention is to produce an improved railway switch that can be located at any portion of a railway track, without the necessity of tearing up or materially modifying the main track, and without the necessity of employing frogs, or like devices, which are more or less objectionable in practice.

In the accompanying drawings, Figure I is a top plan view of my device with the switch set for allowing free travel along the main track. Fig. II is a similar view showing the switch set for shunting cars to the side track. Fig. III is a side elevation of a portion of the switch mechanism, taken on a section-line 3 3 of the road-bed.

Referring to the figures on the drawings, 1 indicates the ordinary cross ties of a railway road bed, upon which main track rails 2 are secured.

3 indicates an outside side track rail and 4 an inside or broken side track rail.

5 indicates the switch rails, pivoted as indicated at 6, in any usual manner to the cross ties. The switch rails are tapered at their free ends so as to form an unobstructing guide to the flanges of passing wheels and are shifted from the main track rails to the side track rails, as by a pitman or connecting rod 7, pivoted as indicated at 8, to the switch rails and pivoted, as indicated at 9, to a crank bearing 10, on a rocking switch bar 11 that is pivotally mounted in boxes 12 secured to the cross ties.

13 indicates a lever handle for operating the switch bar.

The foregoing mechanism is well known in the art and may be varied in many respects in accordance with well known methods within the scope of the work that it has to do.

14 indicates ordinary guard rails which may be employed, but are not essential to my invention. Coming now to that which consti-

tutes properly my invention, 15 indicates a shifting or riding rail that is preferably somewhat tapered from above at opposite ends, as indicated at 16. It is pivoted at one end, as indicated at 17, to an elevated rail section 18 that is gradually downwardly tapered, as indicated at 19, so as to conform at one end to the level of the side track rail 4, and at the other end to the level of the shifting rail 15.

20 indicates another elevated rail section which may be united with the guard rail 14 in order to afford a more rigid support, but this is not essential. It is also provided with an inclined surface 21 designed like the surface of the rail 18 to rise gradually from the level of the side track rail 3 to that of the shifting rail 15.

22 indicates recesses in the faces of each of the elevated rail sections 18 and 20, and serve to support the under side of the shifting rail which is flat and rests squarely upon them. Each of the elevated rail sections is provided with a beveled shoulder 23 against which, when the shifting rail 15 is closed, its similarly beveled ends 24 respectively abut and form a close union. The shifting rail moves upon its pivot 17 into the position across the top of the main track rail 2, as shown in Fig. II, or parallel thereto, as shown in Fig. I. In the first position, by the aid of the elevated rail sections, it affords a smooth supporting surface for the wheels of a train to pass across the main track rails upon the side track rails. When in the latter position it presents an unobstructed main track rail for the travel of the wheels of a train thereon.

The shifting rail, as above explained, is preferably supported between the elevated rail sections, both by the sections themselves and by the main track rail which the shifting rail crosses obliquely, the upper surfaces of the recesses 22 of the elevated rail sections, and of the main track being on the same level.

For supporting the shifting rail when it is turned parallel to the main track rail, I provide a supporting block 25 secured to one of the cross ties and having its upper surface flush with the top of the main track rail against which it abuts.

For operating the shifting rail upon its pivot, I prefer to employ a bar 26 that is hori-



zontally pivoted at one end to a stop piece 27<sup>a</sup> vertically pivoted to a lug 27 dependent from the bottom of the shifting rail 15 and preferably integral therewith. The bar 26 is 5 pivoted at the other end, as indicated at 28, to a crank bearing 29 on the switch bar 11. By this means, the operation of the single lever 13 which is ordinarily employed for operating a switch, the switch rail 15 and switch 10 rails 5 are simultaneously set in the proper correlative positions. The piece 27<sup>a</sup> to which the bar 26 is united, is preferably also employed as a stop piece, as suggested, to limit the pivotal movement of the shifting rail 15, 15 which it does by striking against the side of the main track rail.

I do not confine myself to the details of construction herein shown and described, but reserve the right to modify and vary them at 20 will within the scope of my invention.

What I claim is—

In a rail-way switch, the combination with a main track rail and a side track rail in the same horizontal plane and broken at its inter- 25 section with the main track rail, beveled

swells at the adjacent ends of the side track rail, a riding rail having beveled ends pivoted to the side track rail and supported continuously by the side track rail and by the main track rail, an integral depending medial 30 lug upon the riding rail, a cranked switch bar and riding rail actuating bar pivoted to the crank of the switch bar, and a depending stop piece vertically pivoted to the depending lug and horizontally pivoted to the riding 35 rail actuating bar, said stop piece being adapted to constitute a double pivotal connection between the riding rail actuating bar and the riding rail and to constitute a stop 40 for the latter and a supporting block abutting against and flush with the top of the main track rail and adapted to support the free extremity of the side track rail, substantially as specified.

In testimony of all which I have hereunto 45 subscribed my name.

WILLIAM S. COBURN.

Witnesses:

JNO. C. DEITZ,  
G. A. DURE.