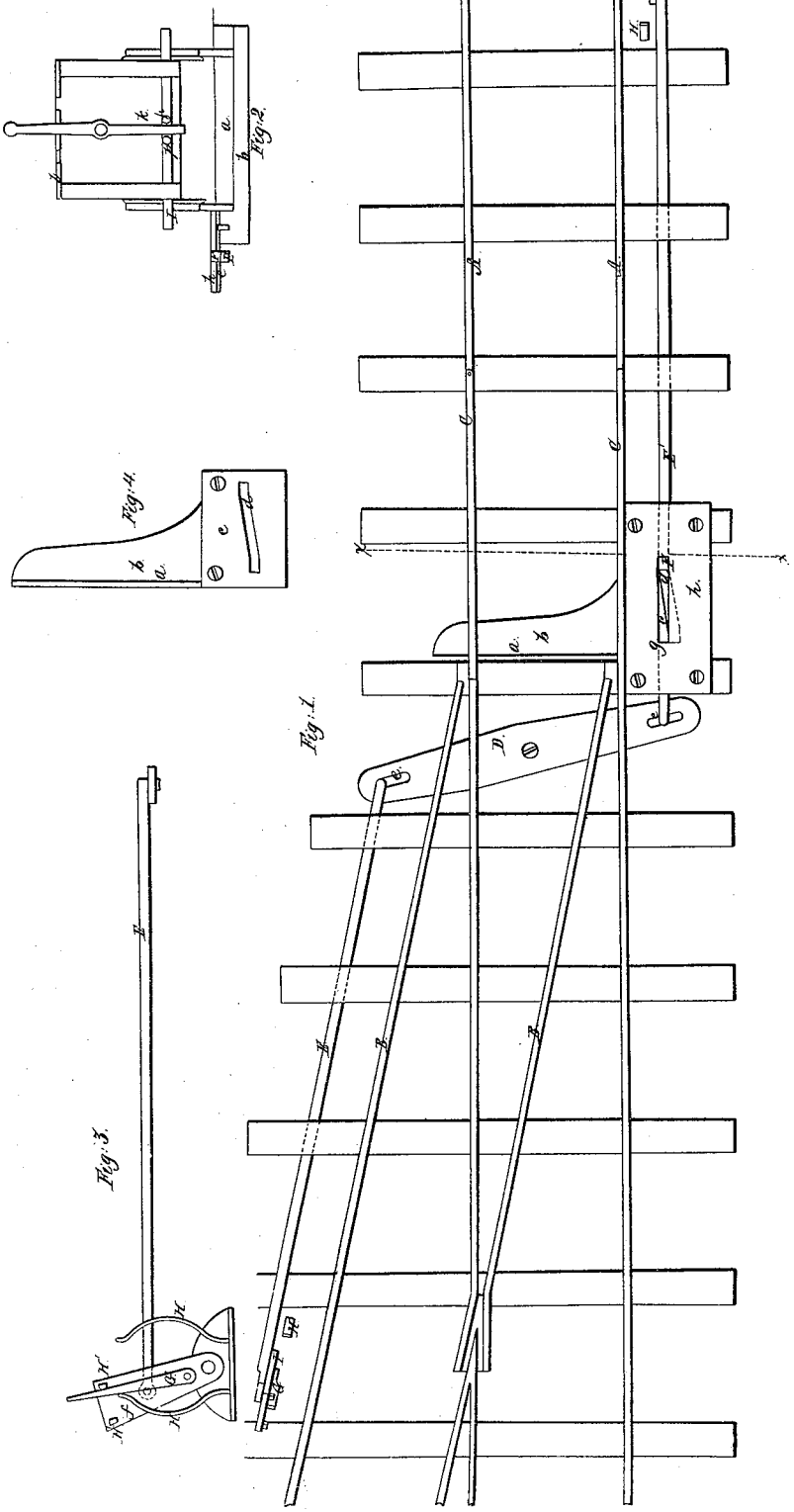
L. B. Woods.

Railroad Switch.

No. 6,427. Patented May 8, 1849.



UNITED STATES PATENT OFFICE.

LUCIUS B. WOODS, OF BRADFORD, NEW HAMPSHIRE.

SELF-ACTING RAILROAD-SWITCH.

Specification of Letters Patent No. 6,427, dated May 8, 1849.

To all whom it may concern:

Be it known that I, LUCIUS B. WOODS, of Bradford, in the county of Merrimack and State of New Hampshire, have invented a new and useful Improvement in Railroad-Switches, which is described as follows, reference being had to the annexed drawings of the same, making part of this specification.

Figure 1, is a top or bird's-eye view of a section of the main track and operation of the oblique or turn out track of a railroad. Fig. 2, is a transverse section of ditto at the line *x x* of Fig. 1. Fig. 3, is a section of one of the connecting rods, vibrating planks, levers for operating the same and springs. Fig. 4, is a top view of the oblong plate containing the oblique shot and the curved bar attached to the same.

Similar letters refer to like parts.

The nature of this invention and improvement consists in arranging in front of the switch a traversing bar or lever moving on a pin at its center and attaching to the end of the same horizontal rod, running parallel with the turn out and main tracks and connected to vibrating plates moving on pieces at the lower end having levers connected to the same, and springs arranged on either side and providing the rods arranged parallel with the main track with a pin or cog rising from the upper surface and passing through an oblique slot formed in an oblong plate secured to the end of a beam attached to the vibrating end of the switch and through a slot parallel with the track formed in a stationary oblong plate in such a manner as to enable the engineer to move said switch to connect with the track on which the locomotive is desired to run by simply moving a lever and causing a horizontal bar to strike the levers attached to the vibrating plates as it passes the same and move said plates and the parts attached to the same sufficiently far to produce the desired result.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

A is the main track of the railroad.

B is the oblique or turn out track of the same.

C is the switch made in the usual manner, connected at its vibrating end to a plate (*a*) rising from the edge of a transverse curved bar (*b*) arranged under the switch, and extending beyond the sides of the same, being secured at one extremity to an oblong plate *c*, projecting beyond its end, and provided with an oblique slot (*d*).

D, is the traversing bar or lever turning on a fulcrum at its center, and perforated with slots (*e*) at its ends, in which are inserted the right angled ends of the connecting rods.

E are the connecting rods attached to the ends of the traversing bar or lever as stated, at one end, and to vibrating plates *f*, turning on pins at their lower ends, projecting from plates secured permanently on the sides of the main and turn out tracks, at their opposite ends.

F is an upright pin or cog, secured to the upper surface of the connecting rod E′ running parallel with the main track, and passing through the oblique slot *d* in the oblong plate *c*, and through a slot *g*, running parallel with the rod formed in another oblong plate *h*, secured permanently, immediately above the plate *c*, containing the oblique slot.

G are levers attached to the lower parts of the vibrating plates by pins, on which they move, and extending above the upper end of the same.

H are curved springs formed somewhat similar to the leaves of elliptical springs secured at their lower ends to the permanent plate, and arranged at equal distances from the pin or bolt upon which the vibrating plates move.

H′ are pins or cogs projecting from the surfaces of the vibrating plates, nearest the respective tracks, at the upper corners of the same.

I is a horizontal bar arranged transversely in front of the locomotive and moving in slots, or grooves formed in the same, projecting beyond the sides of the locomotive, and having pins *p* near its center, projecting from its front surface, between which is inserted the lower end of a traversing bar *k* or lever, moving on a fulcrum at its center and provided with a handle at its upper end.

The manner of operating this switch is as follows: Suppose the ends of the switch to be next the rails of the main track A, as represented in Fig. 1 and the locomotive to be approaching the same on the oblique or turn out tracks B, the engineer or other person to whom the duty is assigned, will move the upper part of the traversing bar *k* or lever from the middle notch formed in the plate *l* to the right hand notch in the same, and cause the horizontal transverse bar *i*, to

be forced out sufficiently far as to strike the upper end of the lever G next the oblique track, and force the same, and with it the upper end of the vibrating plate *f*, by its pressure on the pin or cog H′ from the position represented in Fig. 3, to the same distance to the right of the pins, on which they move, as they were previously to the left of the same, and cause the bar or lever to traverse on its center, and move the pin or cog F, on the connecting bar or rod E′ parallel to the main track through the straight and oblique slots in the oblong plates, which will force the vibrating ends of the switch next the ends of the rails of the turn out or oblique track, before the locomotive reaches the same, so as to conduct it safely on to the main track, at the same time causing the upper part of the vibrating plate *f′* and lever G′ attached to the same to be moved toward the switch after the bar attached to the locomotive has passed over the top of the lever the springs H nearest the switch will force the levers G against the pin or cog projecting from the corners of the vibrating plates farthest from the switch so as to raise their upper ends sufficiently high to enable the engineer or other person to operate on the one next the main track, by moving the horizontal bar to the opposite side of the locomotive, and reinstate the switch to its former position next the end of the main track, after passing over the same, if desired. The lever G′ and vibrating plate *f′*, next the main track are operated upon by the horizontal bar I in case the locomotive is approaching the switch on the main track, in the same manner as those above described, next the turn out track.

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

The combination and arrangement of the traversing bar or lever D, horizontal connecting rods E, oblong plates *h c* containing straight and oblique slots *g*, *d*, in which the pin or cog F, rising from the connecting rod E′ next the main track moves, transverse curved bar *b* secured to the oblong plate *c* containing the oblique slot and to the vibrating ends of the switch vibrating plates *f* having cogs H projecting from the upper parts. Levers G and springs H, and horizontal bar I, on the locomotive, operated as before stated, for moving the ends of the switch either next the end of the rails of the main track, or turn out track, at the option of the engineer or other person to whom the duty is assigned, substantially as herein set forth.

LUCIUS B. WOODS.

Witnesses:
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