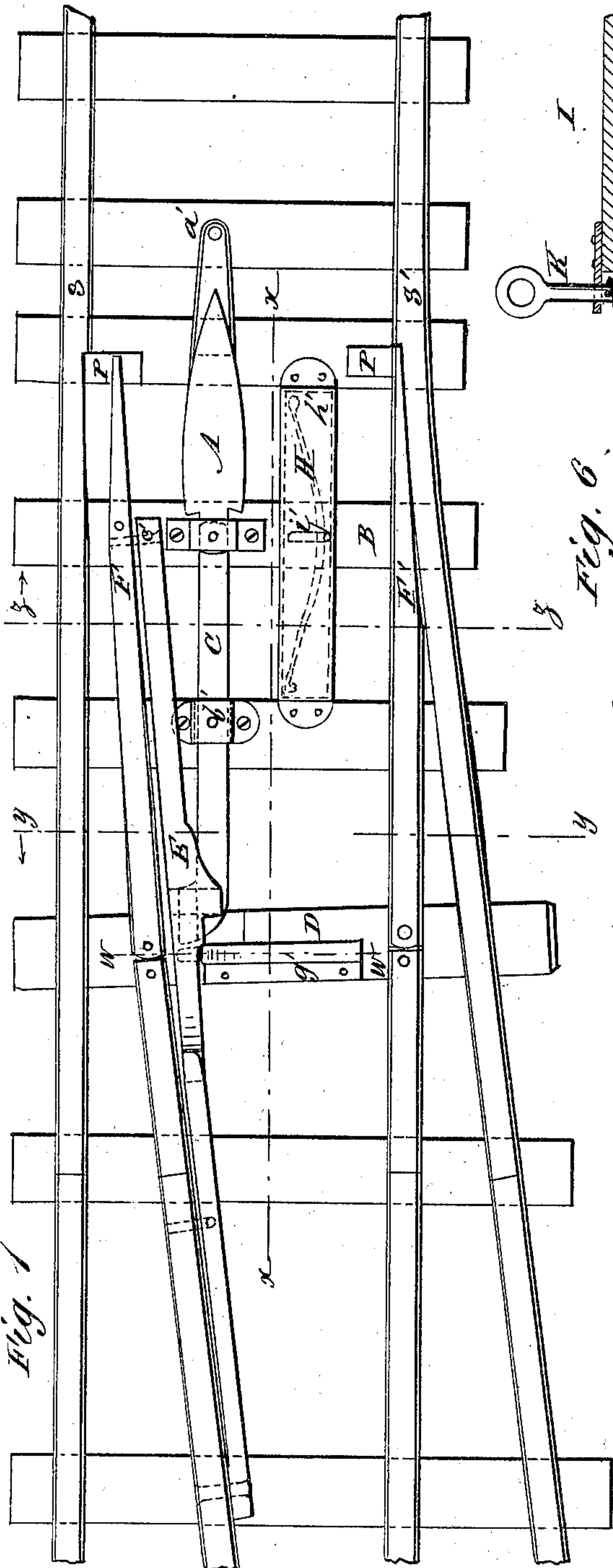


S. B. NICKUM.
Railroad-Switch.

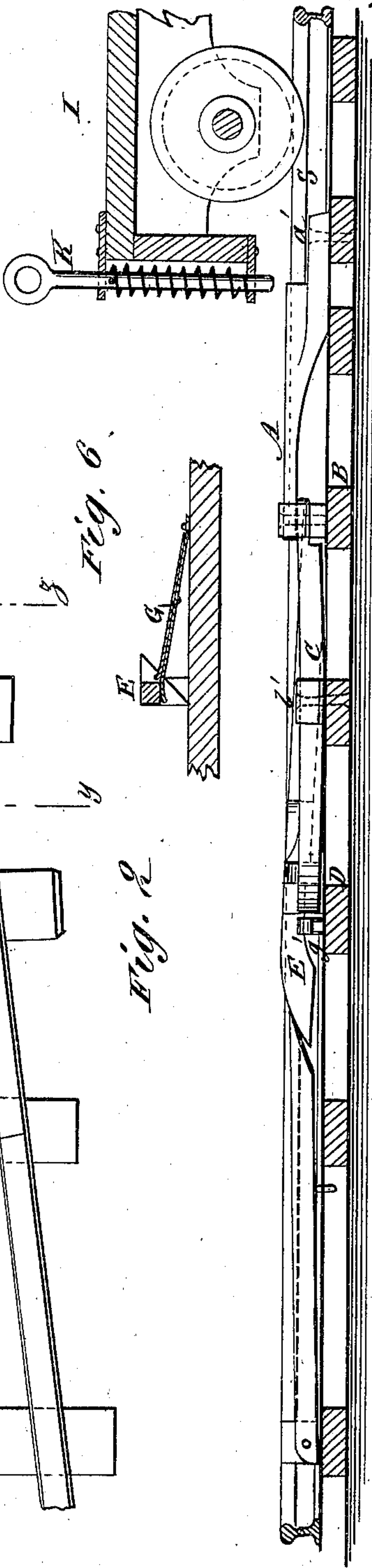
No. 215,960.

Patented May 27, 1879.



WITNESSES:

C. Neveu
P. Sedgwick



INVENTOR:

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UNITED STATES PATENT OFFICE.

SYLVANIS B. NICKUM, OF JALAPA, INDIANA.

IMPROVEMENT IN RAILROAD-SWITCHES.

Specification forming part of Letters Patent No. **215,960**, dated May 27, 1879; application filed February 28, 1879.

To all whom it may concern:

Be it known that I, SYLVANIS B. NICKUM, of Jalapa, in the county of Grant and State of Indiana, have invented a new and Improved Railroad-Switch, of which the following is a specification.

Figure 1 is a plan of the switch. Fig. 2 is a longitudinal section on line *xx*, Fig. 1. Fig. 3 is a cross-section on line *yy*, Fig. 1. Fig. 4 is a cross-section on line *zz*, Fig. 1. Fig. 5 is a vertical section of pin attached to an engine. Fig. 6 is a cross-section on line *ww*, Fig. 1.

Similar letters of reference indicate corresponding parts.

The object of this invention is a railroad-switch that is operated by the passage of the engine and cars over it.

The invention consists in the combination and arrangement of parts, as hereinafter more fully described.

A is a lever, pivoted at *a'*, and having its other end secured to the movable tie B. C is a lever, attached at the same point to the tie B, and pivoted on a fixed tie at *b'*. Its free end is curved and wedge-shaped, and rests on tie D, partly under the side projection on the inner rail, E. This inner rail, E, is pivoted at *c'* to the rail F of the switch, and at its point of contact with C is beveled on its under side to correspond with the wedge-shaped end of C.

G is a spring within a casing, *g'*, that holds up the free end of the rail E when there is no weight pressing upon it, and restores it to position as soon as any weight that has pressed it down shall have been removed.

H is a spring secured within the casing *h'*, that operates to keep the switch closed by pressing against a pin, *i'*, that projects upward from the movable tie B.

In Fig. 2, at I, a section of the front of a car is shown, with pin K, encircled with a spiral spring secured thereon.

The apparatus shown in Fig. 5 consists of a box or casing, L, containing pin *l'*, with a spiral spring, that presses it upward, and an arm or slide, *o'*, that is wedge-shaped on its under face, against which the head of the pin *l'* presses.

In the drawings, Fig. 1, the switch is represented as closed.

When an engine provided with the box L and pin *l'*, or a car provided with the pin K, is run on the switch, the pin may be pressed down, so as to engage against that side of the lever A toward the casing *h'*. The effect of this will be to force the movable tie B in the opposite direction and open the switch, so that the train will run on the side track, and at the same time this movement of the lever A and tie B withdraws the wedge-shaped end of the lever C from underneath the inner rail, E, so that the wheel-flanges of the passing cars may, by their continuous pressure upon E, hold it down, and thereby keep the switch open until the train has passed over. On the removal of this pressure from E it is restored to its primary position by the action of the spring G, when the spring H also takes effect and closes the switch.

P P are plates of metal set on the tie at the point of junction of the rails *s s'* of the main track and the rails F and F' of the switch, to prevent the cutting of the tie by the ends of the rails last named.

Wherever this switch is used, both ends of the cars should be provided with a pin, K, with its spiral spring. For an engine the device shown in Fig. 5 is more convenient. In this the pin *l'* is pressed downward by pulling on the slide *o'*, to which a cord may be attached and placed within easy reach of the engineer.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

1. In the construction of a railroad-switch, the levers A and C, the movable tie B, the inner rail, E, said parts E and C having inclined bearing-faces, and the springs G and H, in combination with the rails F and F', substantially as and for the purpose described.

2. The spring G and casing *g'*, in combination with the inner rail, E, substantially as herein shown and described.

3. In the construction of a railroad-switch, the combination of lever C, inner rail, E, the said lever and rail E having inclined bearing-

faces, and spring G, substantially as herein shown and described.

4. In combination with the switch herein described, the casing L, with slide O' and pin V', substantially as herein shown and described.

5. In combination with the rails S and S',

the rails F F', inner rail, E, movable tie B and levers A and C, substantially as ~~shown~~ shown and described.

SYLVANIS B. NICKUM.

Witnesses:

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