

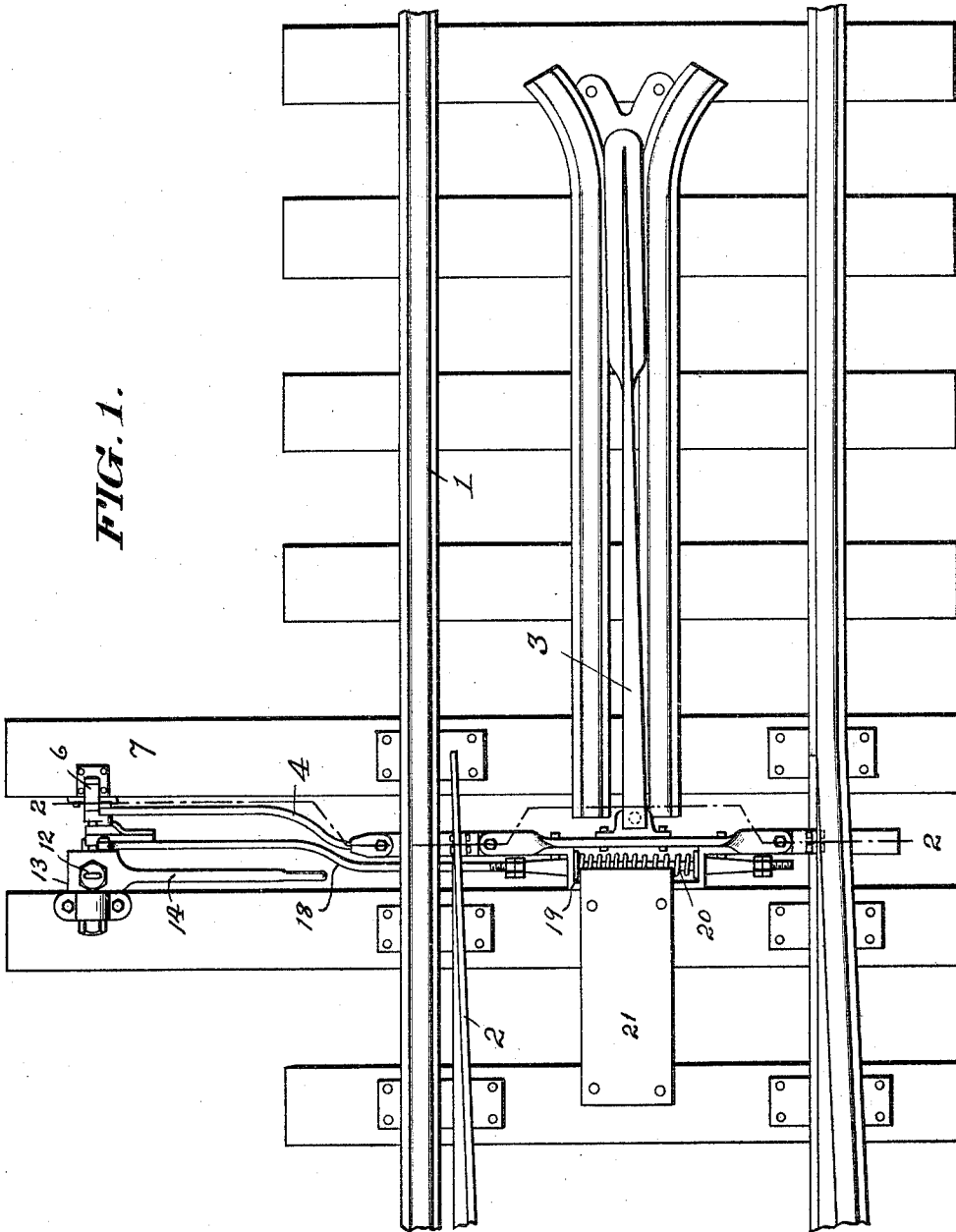
1,006,227.

J. J. KERN.
RAILWAY SWITCH.
APPLICATION FILED JAN. 28, 1911.

Patented Oct. 17, 1911.

2 SHEETS—SHEET 1.

FIG. 1.



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Witnesses
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2 SHEETS—SHEET 2.

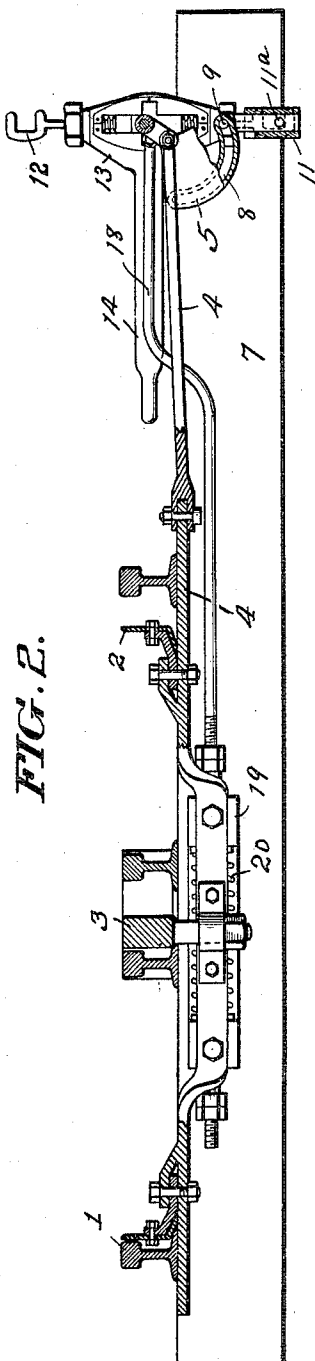


FIG. 2.

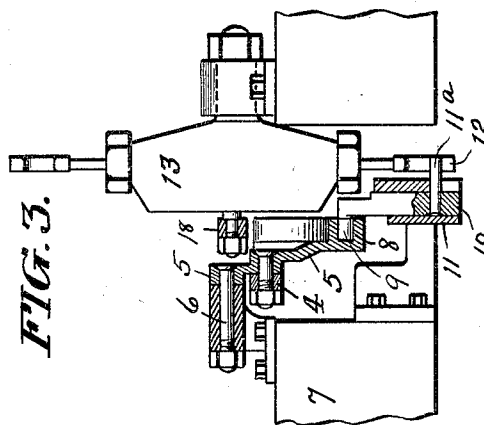


FIG. 3.

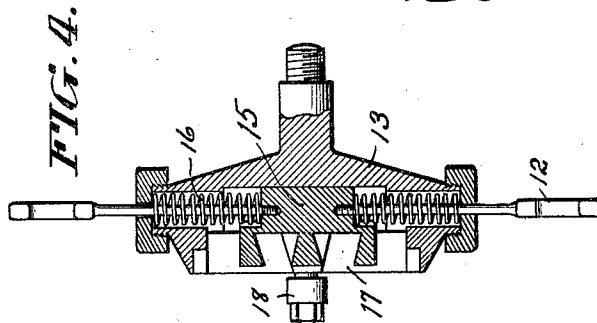


FIG. 4.

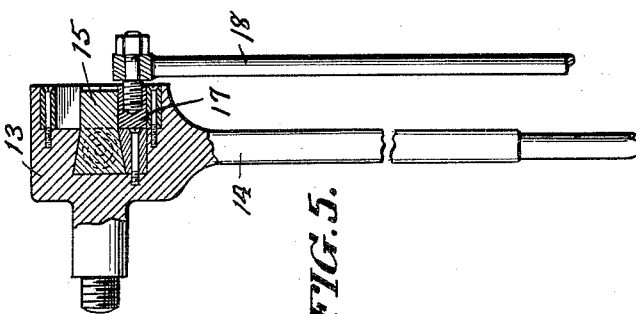


FIG. 5.

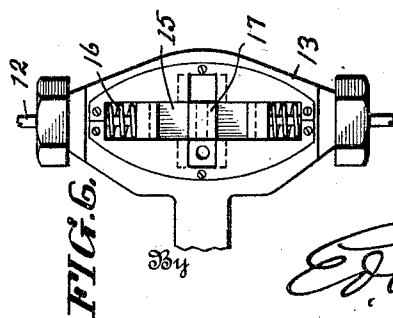


FIG. 6.

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UNITED STATES PATENT OFFICE.

JOHN J. KERN, OF READING, PENNSYLVANIA.

RAILWAY-SWITCH.

1,006,227.

Specification of Letters Patent. Patented Oct. 17, 1911.

Application filed January 28, 1911. Serial No. 605,174.

To all whom it may concern:

Be it known that I, JOHN J. KERN, citizen of the United States, residing at Reading, in the county of Berks and State of Pennsylvania, have invented certain new and useful Improvements in Railway-Switches, of which the following is a specification.

This invention relates to improvements in railway switches and the object in the present instance is to provide a railway switch that may be operated either by the usual hand lever or by a switch operating device carried by a moving vehicle.

The invention consists of a switch bar located between the tracks and capable of being moved in either direction by a device on a locomotive in passing, and a spring actuated device in connection therewith, whereby, when the switch is moved a portion of its travel by the action of the passing vehicle, the spring action will come into play and complete the throw of the switch.

The invention is more fully described in the following specification and clearly illustrated in the accompanying drawings, in which:—

Figure 1 is a plan view of my switch. Fig. 2 is a sectional view taken on line 2—2 of Fig. 1, and slightly enlarged. Fig. 3 is a detail, partly in section of the quadrant and operating bar. Fig. 4 is a section of the spring housing. Fig. 5 is a detail of the hand lever, partly in section. Fig. 6 is a plan view of the spring housing.

The numeral 1 designates the rail and 2 the switch.

3 designates the switch bar and 4 the switch operating rod which is secured to the switch and the switch bar and all of which are adapted to move together. The extremity of the operating rod is pivotally secured to a quadrant 5 which is mounted at its upper end in a journal 6 on one of the cross-ties 7. The large end of the quadrant is formed with a curved slot 8, which curve is struck from the center at which the operating rod is connected to it and not from the point at which it is pivoted in its journal. The slot 8 engages a pin 9 on the upper end of a vertically sliding block 10 which moves up and down in a guide 11. This block carries at its lower end a pin 11^a which is adapted to engage the hook 12 at either end of the spring housing 13. This housing 13 is formed integral with the hand lever 14 for throwing the switch, and, as

shown in Fig. 4, the hooks 12 are secured to a block 15 and each is surrounded by a coiled spring 16 which springs bear against the block. This block while capable of vertical movement in the housing, is also formed with dove-tail grooves on its face and in these grooves, another block 17 is located. These blocks are arranged to move at right angles across each other and the latter named, 17, is connected to a rod 18 which lies substantially parallel with the operating rod 4 and which is provided with a housing 19 through which it passes loosely, which housing is formed integral with or secured to the operating rod 4. In this housing surrounding the rod 18, is located a coiled spring 20.

In close proximity to the movable end of the switch bar 3, and in line therewith, I locate a tapered block 21.

The operation of the device is as follows:—When the engine or vehicle carrying a suitable mechanism for operating the switch reaches the switch bar, the operating device is lowered to engage the bar 3 at either side. With the parts as shown in Fig. 1, this would be made to engage the bar at the left side. This action would move the bar 3 to the right and with it the bar 4, and the switch 2, for a distance equal to one-half of its throw. This action would compress the spring 20. At the same time the movement of the rod 4 would turn the quadrant 5 on its pivotal point 6 and cause the groove 8 to force the pin within it down, carrying down the block 10 and through the pin 11^a the hook 12 will be depressed and draw down, against the action of the spring 16, the block 15 in the housing 13. When this block has been drawn to the center, where its cross-groove registers with the block 17, this block being located on the end of the rod 18 which is backed by the spring 20, will be free to move across the block 15 by the action of this spring, and this movement will complete the throw of the switch.

The housing 13 is provided with a hook at each end so that when the switch is thrown by hand, in either direction, one of the hooks 12 will always be in engagement with the operating bar and its connections.

What I claim and desire to secure by Letters Patent is:—

1. In a railway switch, a movable switch bar capable of being operated by a passing vehicle, a switch, an operating rod to which

the switch and switch bar are connected, a quadrant on the end of the operating rod, a movable block operated by said quadrant, a block on the end of the operating rod adapted to move across said first named block when brought to register with the groove in said block and a spring for moving said last named block.

2. In a railway switch, a movable switch bar, a switch and an operating rod connected together, a quadrant connected to the free end of the operating rod, a groove in the quadrant in which a movable block is secured by a pin, a spring backed block to which said movable block is connected, a laterally movable block slidably secured in the face of the spring backed block, and a spring actuated rod attached to said sliding block adapted to move it across the spring

backed block when the quadrant has moved the spring backed block into central position.

3. In a railway switch, the combination of a switch, a switch bar and an operating rod connected together, with a spring actuated shifting rod, a block secured to the operating rod, a block secured to the shifting rod, said blocks being slidably connected and adapted to move at right angles to each other, and means connected to the operating rod to move one of said blocks in position to permit the other block to slide across it.

In testimony whereof I affix my signature, in presence of two witnesses.

JOHN J. KERN.

Witnesses:

CLARA E. YOUNG,
ED. A. KELLY.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
