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PATENTED OCT. 30, 1906.

E. A. PETERSON.

STREET RAILWAY SWITCH OPENING AND CLOSING DEVICE.

APPLICATION FILED JAN. 6, 1906.

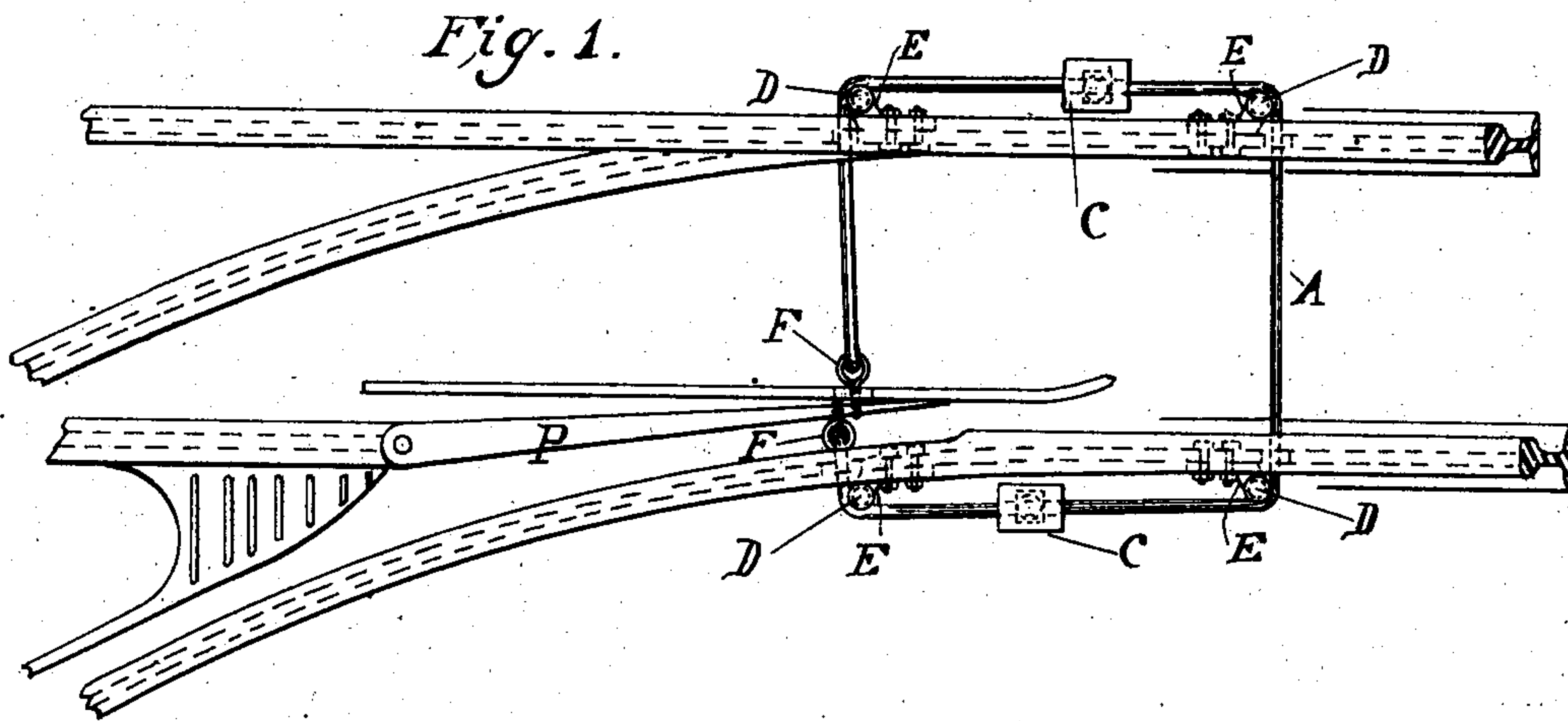


Fig. 2.

Fig. 5.

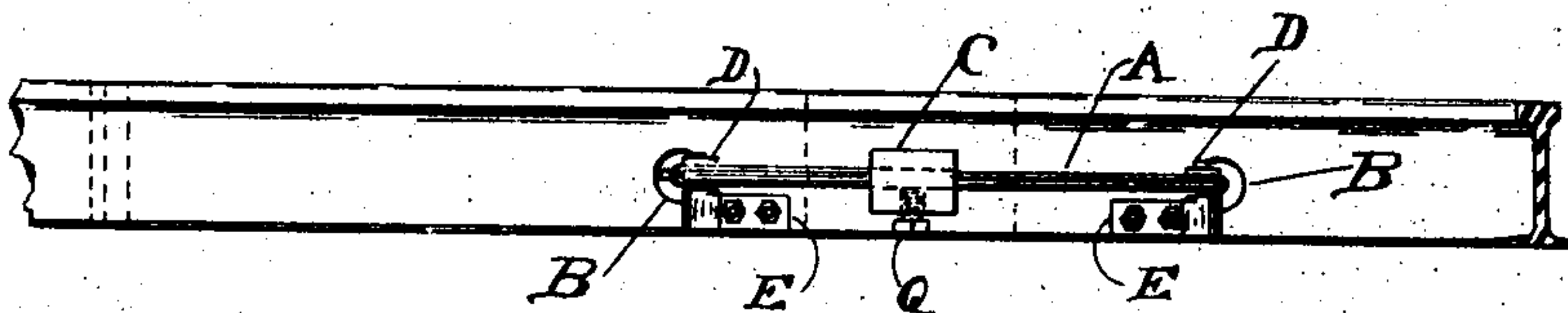
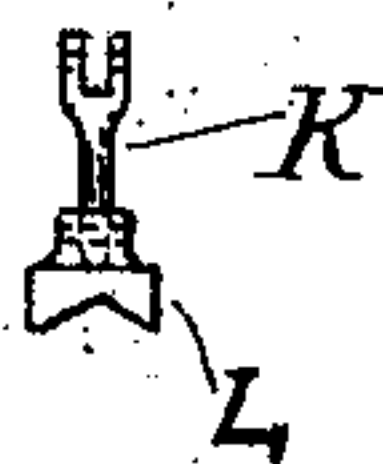


Fig. 4.

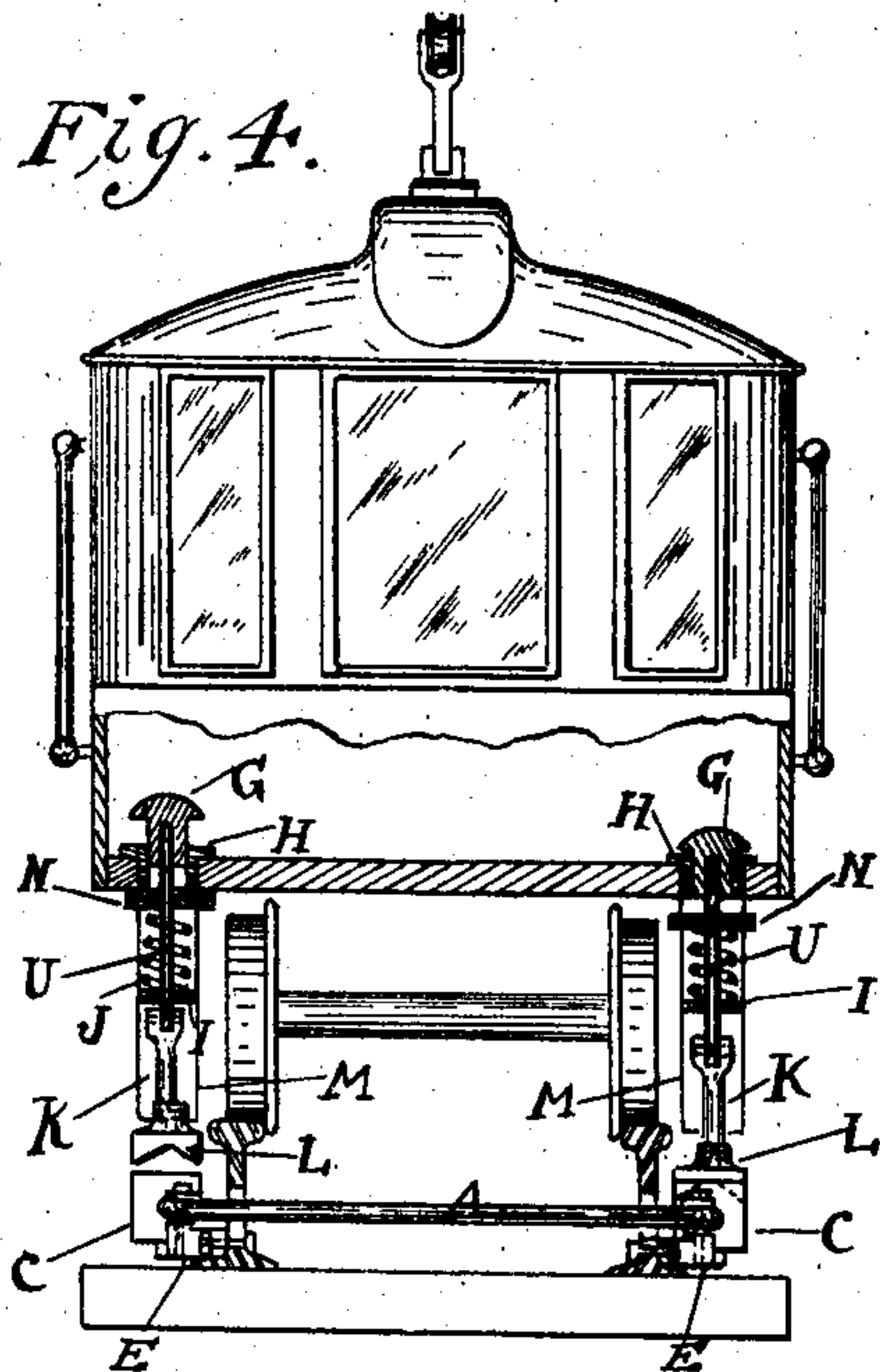
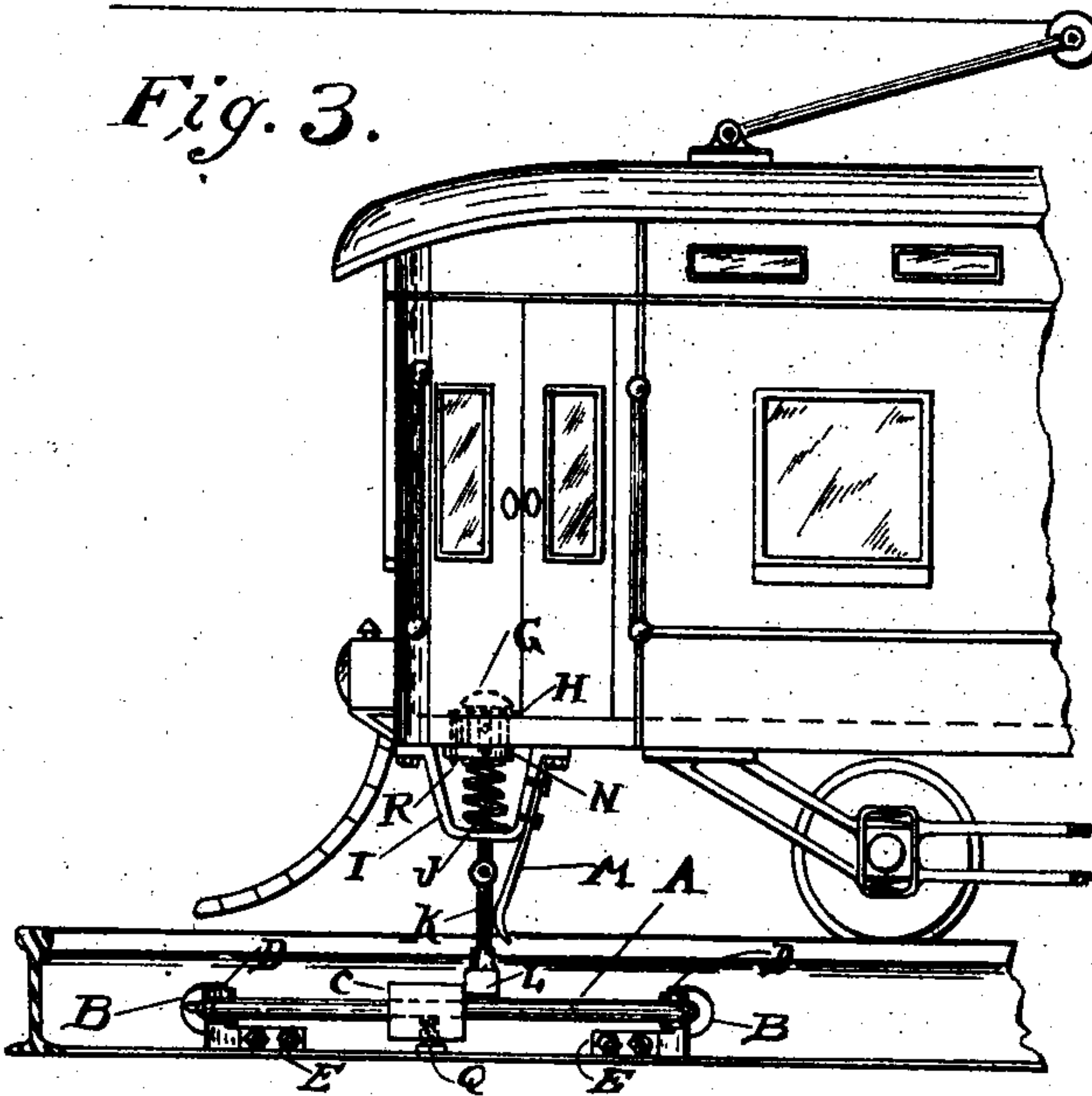


Fig. 3.



Witnesses.

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UNITED STATES PATENT OFFICE.

EPHRAIM A. PETERSON, OF ROCKFORD, ILLINOIS.

STREET-RAILWAY-SWITCH OPENING AND CLOSING DEVICE.

No. 834,403.

Specification of Letters Patent.

Patented Oct. 30, 1906.

Application filed January 6, 1906. Serial No. 294,931.

To all whom it may concern:

Be it known that I, EPHRAIM A. PETERSON, a citizen of the United States, residing at Rockford, in the county of Winnebago and State of Illinois, have invented a new and Improved Street-Railway-Switch Opener and Closer, of which the following is a specification.

My invention relates to devices for operating street-railway switches direct from the car while the same is in motion, and thus open or closing the switch by means of pressing a button on the platform of the car.

I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a plan view of the switch, showing the construction of the same as being open to let the car pass by to the left. Fig. 2 is a side elevation of the rail to which part of the mechanism is applied, Fig. 3 showing a side elevation of part of the car on the rails just entering the switch and opening the same, Fig. 4 showing an end view or a vertical section, Fig. 5 showing an end view of the connecting-rod with its V-shaped catch-block.

Similar letters refer to similar parts throughout the different views.

The cable or chain A, running through holes B B B B in the rails on the rollers D D D D, forming a rigid connection with the switch-tongue P by means of screws or bolts F F or similar parts, the cable or chain A being run through blocks C C and tightening the said blocks by means of set-screws Q Q, Fig. 3, the buttons G G are vertically operated in sleeves or bushings H H, and also being connected to the vertical rods U U, and the said rods being held in place by braces I I and collars N N with pins R R through the said collars as to prevent the shafts or rods U U from twisting, and collars N N also being provided with set-screws or pins, connecting-rods K K, provided with V blocks or catch-blocks L L, always remaining a little above the rails until the buttons G G are being pressed with the foot shortly before entering the switch, then the blocks L L are far enough down so as to catch the blocks C C and running the cable A forwards which opens or closes the switch, which button you happen to press, and when the cable has been moved as far as the switch will allow then the connecting-rods K K give against the springs M M, and the blocks

L L slide over the blocks C C and retains the switch open or closed whichever may be desired.

Fig. 2: Holes B B B B are bored through the rails large enough so as to let the cable A pass through freely and run on rollers D D D D, the said rollers being supported by brackets E E E E, which are screwed or bolted fast to the rails. Cable A must be as far down as possible next to the ground or brickwork, whichever the street may be constructed of or surrounded by.

Fig. 5: V-blocks or catch-blocks L L pinned to the connecting-rods K K, said connecting-rods being slotted at the upper ends and pinned to the vertical rod U U.

Figs. 3 and 4: The springs J J, spiral compression type, are around the rods U U and supported by the collars N N and braces I I.

Fig. 4: End view showing two buttons G G, both being constructed the same, meaning that these are two press-buttons and combinations thereof on each end or platform of the car placed directly over the cable A, just outside of the rails, so as to let the catch-blocks L L come in contact with the cable-blocks C C when the buttons G G being pressed and blocks L L on their lowest positions, thus moving the cable A forward and operating the switch P, which was explained before.

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

1. In a street-railway, the combination with main-line rails and a movable switch-point, of a cable connected to said switch-point and passing over rollers supported on brackets secured to said main-line rails, blocks on said cable, a car, vertical rods on said car, and trip-blocks on said rods to engage the blocks on said cable and move said switch-point, substantially as described.

2. In a street-railway, the combination with main-line rails and a movable switch-point, of a cable having both ends adjustably secured to said switch-point, and the webs of said main-line rails having holes through which said cable passes, substantially as described.

3. In a street-railway, the combination with main-line rails, a cable having blocks connected to a movable switch-point, and a car having vertical rods, working in a vertical direction and held up by coiled springs, braces secured underneath the car, flat

springs secured to said braces, and the said rods having pivoted joints, said rods being thrown back against said flat springs to permit trip-blocks secured to the lower ends of
5 said vertical rods, to pass over said cable-blocks when said switch-point has been moved, substantially as set forth.

4. In a street-railway, the combination with main-line rails, a movable switch-point
10 connected to a cable having blocks, and a car having vertical rods, said rods provided with collars, and having trip-blocks on their lower ends, said collars prevented from twisting by pins secured to the car and said
15 collars being in a vertical direction on said pins, preventing said rods from twisting, said vertical rods provided with press-buttons, said buttons working in sleeves, said

sleeves secured to the car, one of said trip-blocks engaging one of said cable-blocks 20 when said button is pressed to engage the aforesaid block with one of the cable-blocks to open the said switch, and when the button on the opposite side is pressed so as to engage the second trip-block with the cable- 25 block on the opposite side to close the switch, substantially as described, and for the purpose specified.

In testimony whereof I have signed my name to this specification in the presence of 30 two subscribing witnesses.

EPHRAIM A. PETERSON.

Witnesses:

DEWEY S. KNAPP,
JOHN J. ANDREWS.