No. 611,193. Patented Sept. 20, 1898.

L. J. BENNETT.

SWITCH OPERATING DEVICE.

(Application filed Sept. 20, 1897.)

(No Model.)

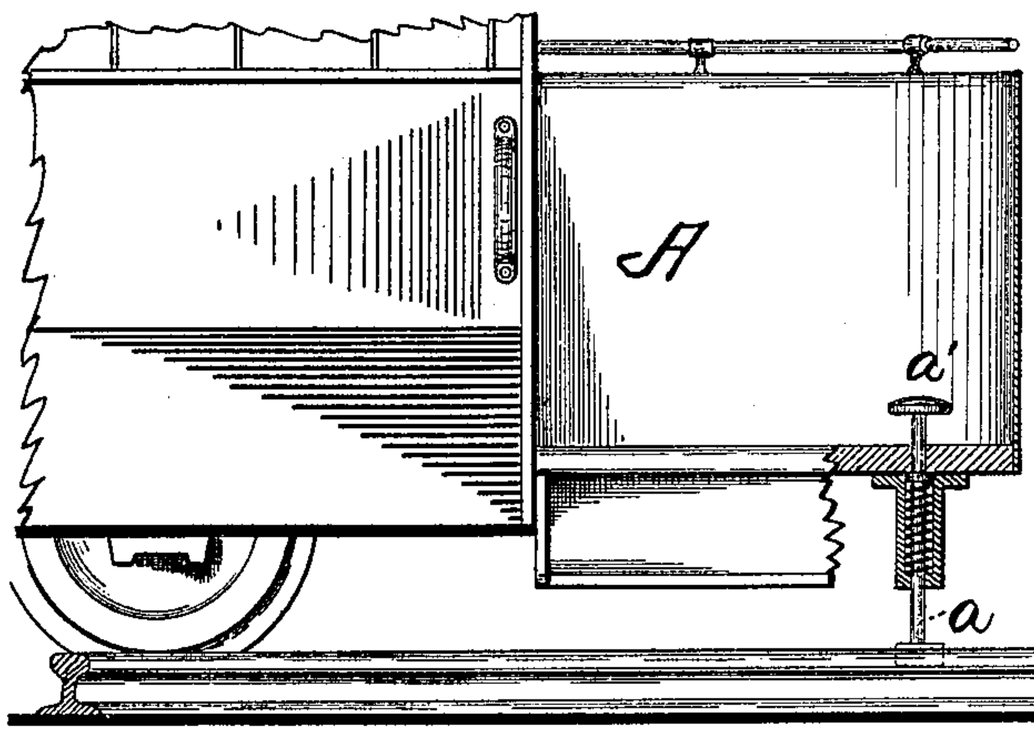

Fig. 1.

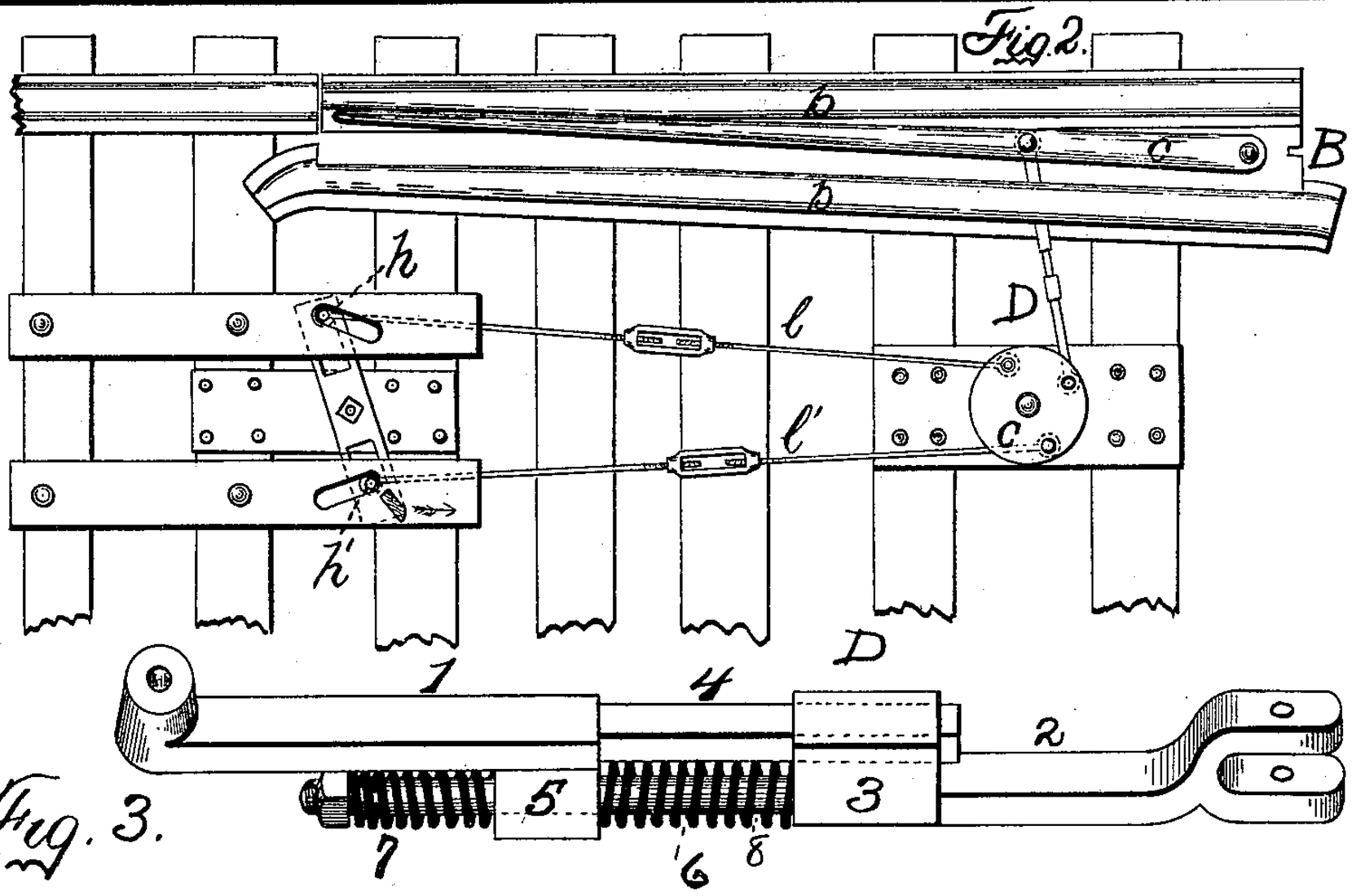

Fig. 2.

Fig. 3.

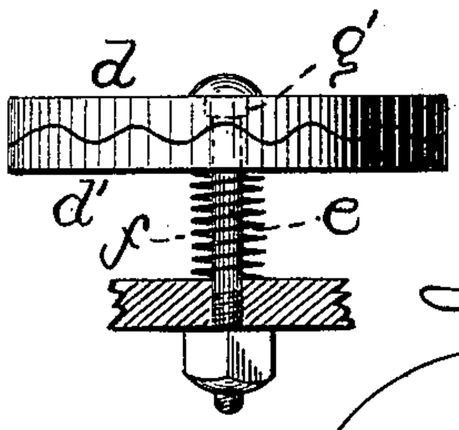

Fig. 4.

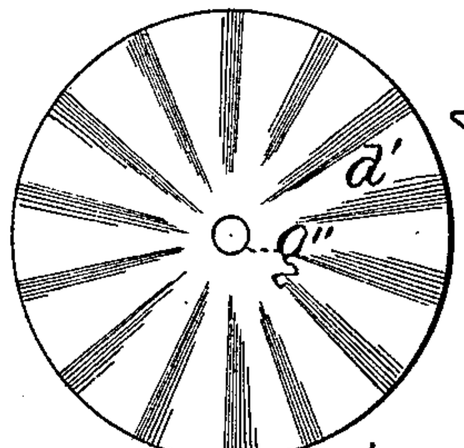

Fig. 6.

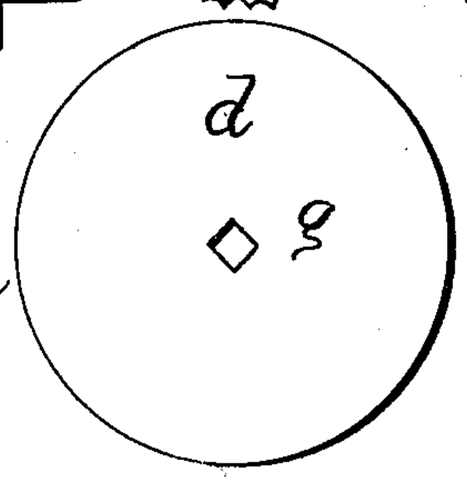

Fig. 5.

WITNESSES:
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LAWRENCE J. BENNETT, OF SOLVAY, NEW YORK.

SWITCH-OPERATING DEVICE.

SPECIFICATION forming part of Letters Patent No. 611,193, dated September 20, 1898.

Application filed September 20, 1897. Serial No. 652,394. (No model.)

To all whom it may concern:

Be it known that I, LAWRENCE J. BENNETT, of Solvay, in the county of Onondaga, in the State of New York, have invented new and useful Improvements in Switch-Operating Devices, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

This invention relates to the construction and operation of devices for turning the switch rail or tongue of a switch in railroads, it being more particularly adapted and designed for street-railroads.

My object is to produce a device so arranged, adapted, and connected with the switch rail or tongue of a switch that it can be operated by the motorneer without stopping the car to turn it either way, as desired; and to that end my invention consists in the several new and novel features of construction and operation hereinafter described, and which are specifically set forth in the claims hereunto annexed.

It is constructed as follows, reference being had to the accompanying drawings, in which—

Figure 1 is a side view of the front end of a car, showing a foot-actuated arm adapted to operate the switch-rail upon the switch. Fig. 2 is a top plan view of the switch, showing the means for operating the tongue. Fig. 3 is a view of the connecting-rod which operates the switch. Fig. 4 is a view of the disk which is rotated to operate the connecting-rod. Figs. 5 and 6 are views of the two-part disk.

Similar letters and numerals of reference indicate corresponding parts.

A is the car, provided upon the forward platform with a spring-actuated arm *a*, adapted to be depressed by the foot-piece *a'*.

B is a frog constructed in the ordinary way, having guide-rails *b*, as usual, and a switch-rail *c*, pivoted in the ordinary way.

Upon the side of the switch is mounted a two-part disk C, and is composed of the parts *d* and *d'*, their adjacent faces being preferably radially corrugated, and both are mounted upon the standard *e*, and *f* is a spiral spring interposed between the base of the standard *e* and the lower portion of the disk *d'*. The upper disk is provided with a square opening, so as to receive the square upper end of the standard *g*, so as to prevent and keep it from rotation, while the lower disk is provided with a round opening *g''* to permit of rotation.

D is a connecting-rod connecting the disk *d'* with the switch-tongue and comprising two parts 1 and 2. The part 2 has a strap 3, which receives the tongue 4 upon the part 1, and the part 1 having a strap 5, adapted to receive the tongue 6 of the part 2, and 7 and 8 are coil-springs mounted on the tongue 6, so as to produce a tension for the purposes hereinafter set forth.

Mounted at a suitable distance from the disk C and parallel with the rail are two standards *h* and *h'*, and *l* and *l'* are two rigid rods connecting these standards or posts *h* and *h'* to the opposite sides of the disk *d'*, the connecting-rod D being secured to said disk midway between the two points of connection *l* and *l'*.

My invention is operated as follows: Assuming that the switch-rail is open, when the car approaches the switch the motorneer depresses the arm *a* with his foot upon *a'* until the base comes in contact with the post *h*, pushes it forward, rotates the disk, which in turn pulls the switch-tongue *c* over to the right, and allows the car to take the main track. In order to prevent an ingoing car interfering with the portion of the switch-tongue, I have constructed a connecting-rod D, as shown, so that when the flange of the wheel comes in contact with it it will allow it to pass; but the springs will immediately return it to its position when it has passed by. It will also be observed that by roughening or radially corrugating the adjacent faces of the disks *d* and *d'* that when the disk *d* is rotated it will be obliged to force it down, but that when it has been turned sufficiently it will again return to its normal position and maintain the switch-rail where it is placed.

Having described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The combination with a frog and a switch-rail thereon, of a two-part disk mounted at the side of the frog, a rod connecting said disk and switch-rail, studs adapted to engage with an arm on the car, suitably

mounted and connected with said disk for the purpose of operating it and turning the switch-rail.

2. The combination with a frog and a switch-rail thereon, of a disk comprising two parts, having their adjacent faces corrugated or roughened, one of the parts of said disks being yieldingly mounted and a yielding rod connecting one of the parts of said disks with the switch-rail, studs adapted to engage with an arm on the car, suitably mounted and connected with said disk for the purpose of operating it and turning the switch-rail.

In witness whereof I have hereunto set my hand this 20th day of May, 1897.

LAWRENCE J. BENNETT.

In presence of—
MARY A. FRANKLIN,
HOWARD P. DENISON.