(No Model.) 2 Sheets—Sheet 1.

S. WALTERS.

SWITCH OPERATING DEVICE.

No. 547,594. Patented Oct. 8, 1895.

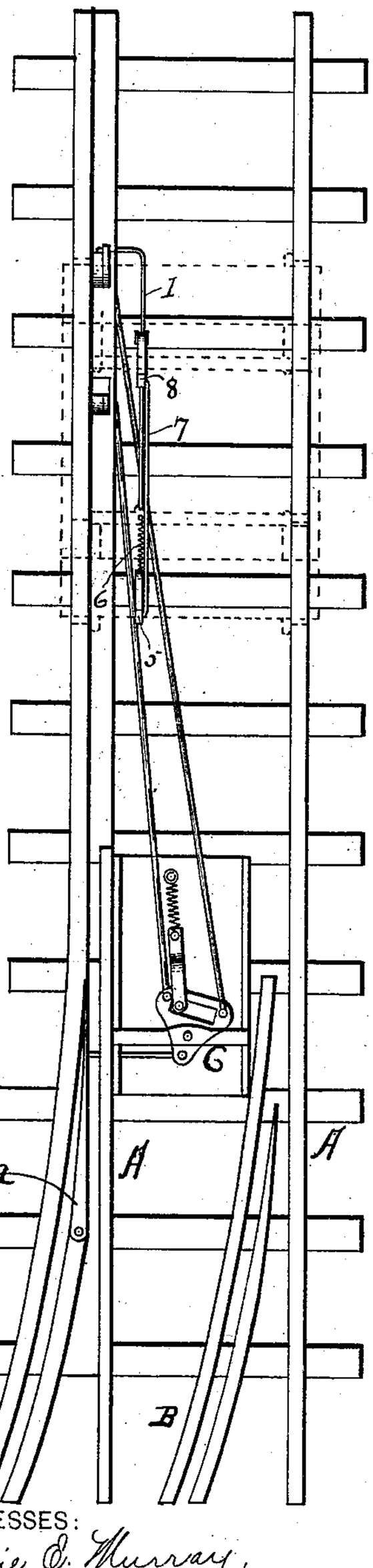

Fig 1

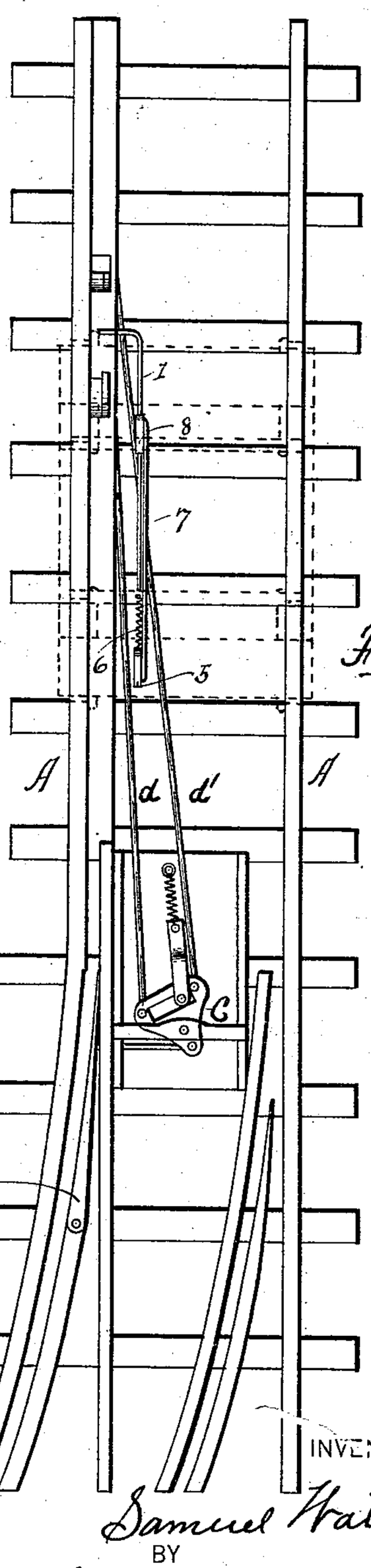

Fig. 2

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(No Model.) 2 Sheets—Sheet 2.

S. WALTERS.

SWITCH OPERATING DEVICE.

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Fig 3

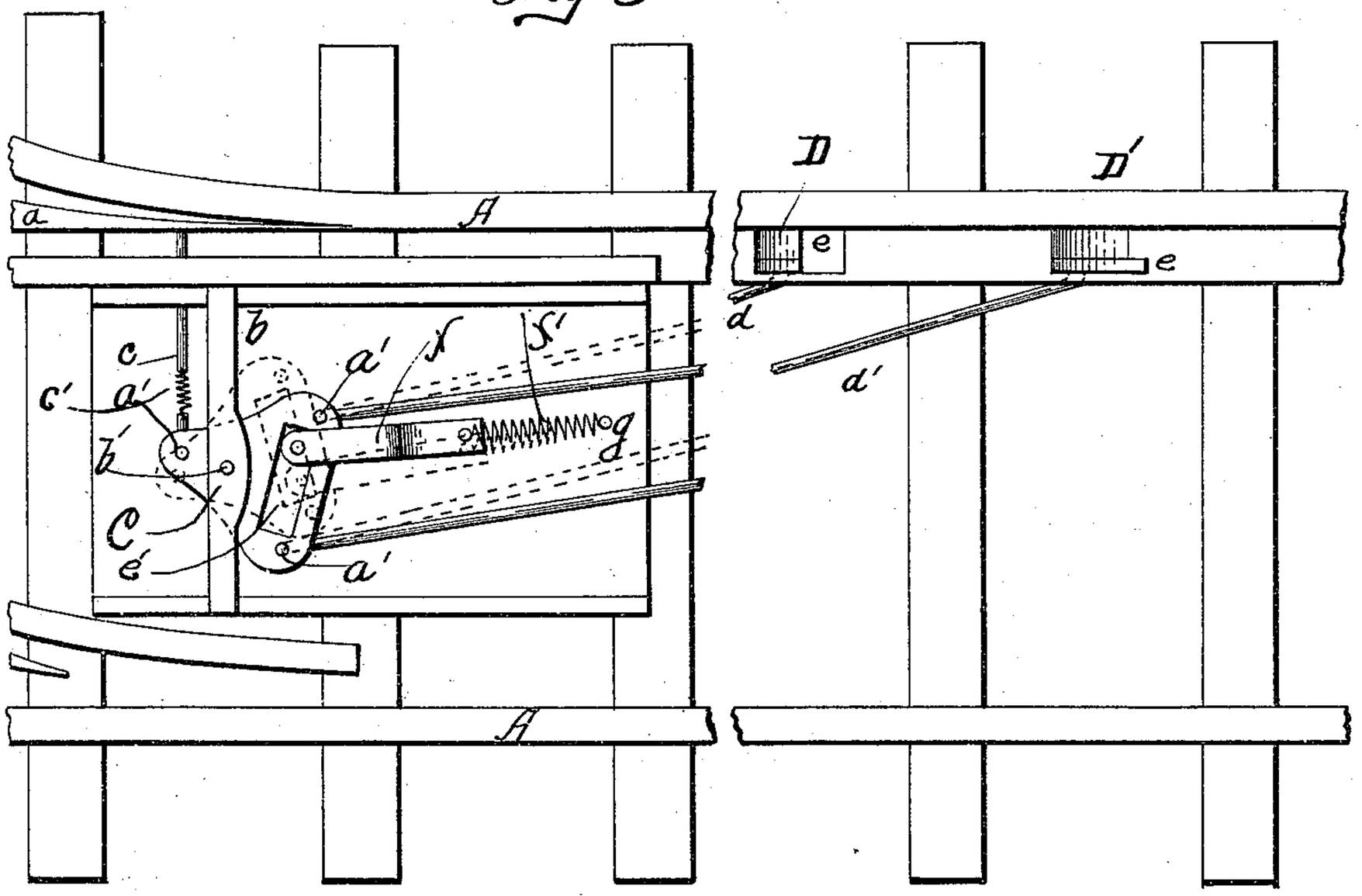
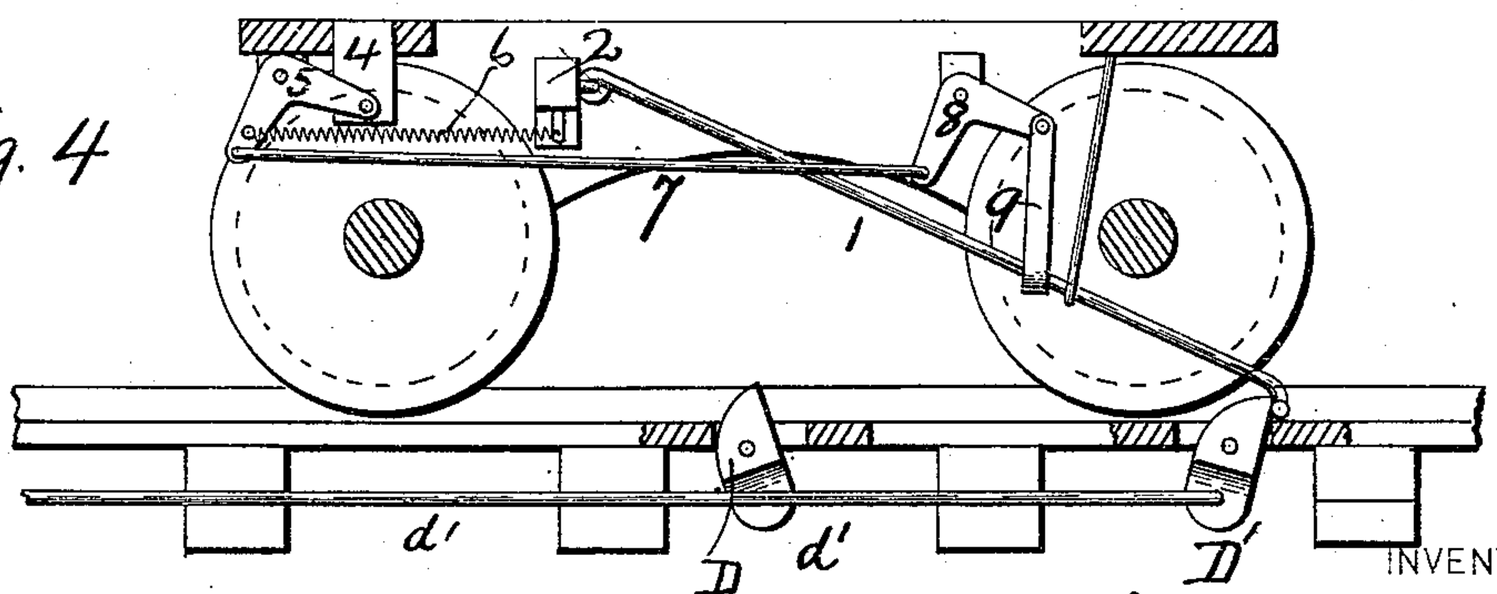


Fig. 4



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UNITED STATES PATENT OFFICE.

SAMUEL WALTERS, OF WARREN, PENNSYLVANIA.

SWITCH-OPERATING DEVICE.

SPECIFICATION forming part of Letters Patent No. 547,594, dated October 8, 1895.

Application filed July 25, 1895. Serial No. 557,074. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL WALTERS, of Warren, in the county of Warren, in the State of Pennsylvania, have invented new and useful Improvements in Devices for Operating Switch-Tongues from the Platform of a Car, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

This invention relates to devices for operating a switch-tongue from the platform of a car, having more particular reference to street-railway service.

My object is to construct means which are connected with the truck for operating the tongue of a switch, and also means upon the platform of a car to engage with such means, so that the tongue may be easily and readily operated therefrom; and to that end my invention consists in the several new and novel features and combinations of parts hereinafter described, and which are specifically set forth in the claim hereunto annexed.

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

Figure 1 is a top plan view of the device which operates the tongue, mounted upon the ties between the rails, showing the tongue as it appears when no switch is desired. Fig. 2 is a similar view showing the position of the parts and the tongue when it is desired to switch to one side. Fig. 3 is an enlarged top plan view of the lever, showing the triangular shifter. Fig. 4 is a longitudinal vertical section through the truck, showing the means for operating the switch from the car.

A are the rails of the main track, and B are the rails of the side track leading therefrom in the ordinary way.

a is the switch-tongue mounted, as shown, in the ordinary way.

C is a triangular shifter mounted and pivoted upon the cross-rail *b* at the point *b'*, and is provided with openings in its corners *a'*.

c is a rod connecting the free end of the switch-tongue with the outer end of the triangular shifter C, as shown in Fig. 3.

Upon the inner flange of the rail and at a suitable distance apart are mounted arms D D', and *d* is the rod connecting the arm D with the triangular shifter C, and *d'* is a similar rod connecting the arm D' with the opposite side of the shifter. The arms D and D' are each provided with lugs *e*, which extend slightly above the flange of the rail for the purposes hereinafter more fully set forth.

The shifter C is provided with a central opening in its lower part *e'*, and *f* is a bracket carrying a frictional roller or pin engaging with said opening *e'* and forms a clevis with said opening.

f' is a spring or other elastic connection between the bracket *f* and a fixed point *g*, so as to produce a tension upon the bracket *f* and the shifter C, so that when the shifter is in the position shown in Fig. 3 the bracket *f'* will slide into one end of the opening *e* and hold by its intermediate connection the tongue of the switch in position, as shown in Fig. 3. When the switch is thrown open, the bracket *f* will assume a similar position in the opposite edge of the opening *e* and hold the tongue in position, so as to keep the switch open. Upon the truck is a rod 1, secured to the cross-piece 2 and having its free end extended down, as shown at 3, so as to come in engagement with the inner flange of the track.

4 is a foot-piece mounted in the platform and connected with a crank-arm 5, which is actuated by a spring 6. To the outer end of the crank-arm 5 I connect a rod 7, which rod is connected to a crank-arm 8, suitably mounted, the opposite end of the arm being connected to a rod 9, which is secured to the rod 1 and by which it is operated. When the foot-piece 4 is depressed the rod 7 is drawn forward and the arm 9 depressed, which throws the lower end of the rod 1 down upon the flange of the track, so that it engages with the first arm D' mounted in the flange. This pulls the said arm over and draws the rod *d'* backward, throwing the switch open, as shown in Fig. 2. When it is desired to close the switch, the rod 1 is not allowed to come in contact with the arm D', but with the arm D. This operates the other side of the shifter and closes the switch. The rod *c* is provided with a spring *c'*, so as to allow the rod *c* to expand in case there is a stone or other obstruction between the tongue and the flange of the rail, and thus prevent breaking of the parts.

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

The slotted shifter, pivoted between the rails, the switch tongue, and a rod for connecting the two, combined with the two rods connected to opposite corners of the shifter, two pivoted arms to which the outer ends of the two rods are connected, the bracket *f*, having its inner end to catch in the slot in the shifter, and the spring secured to the outer end of the bracket, substantially as shown.

In witness whereof I have hereunto set my hand on this 8th day of July, 1895.

SAMUEL WALTERS.

In presence of—
ROGER MOONEY,
H. J. BIRNS.