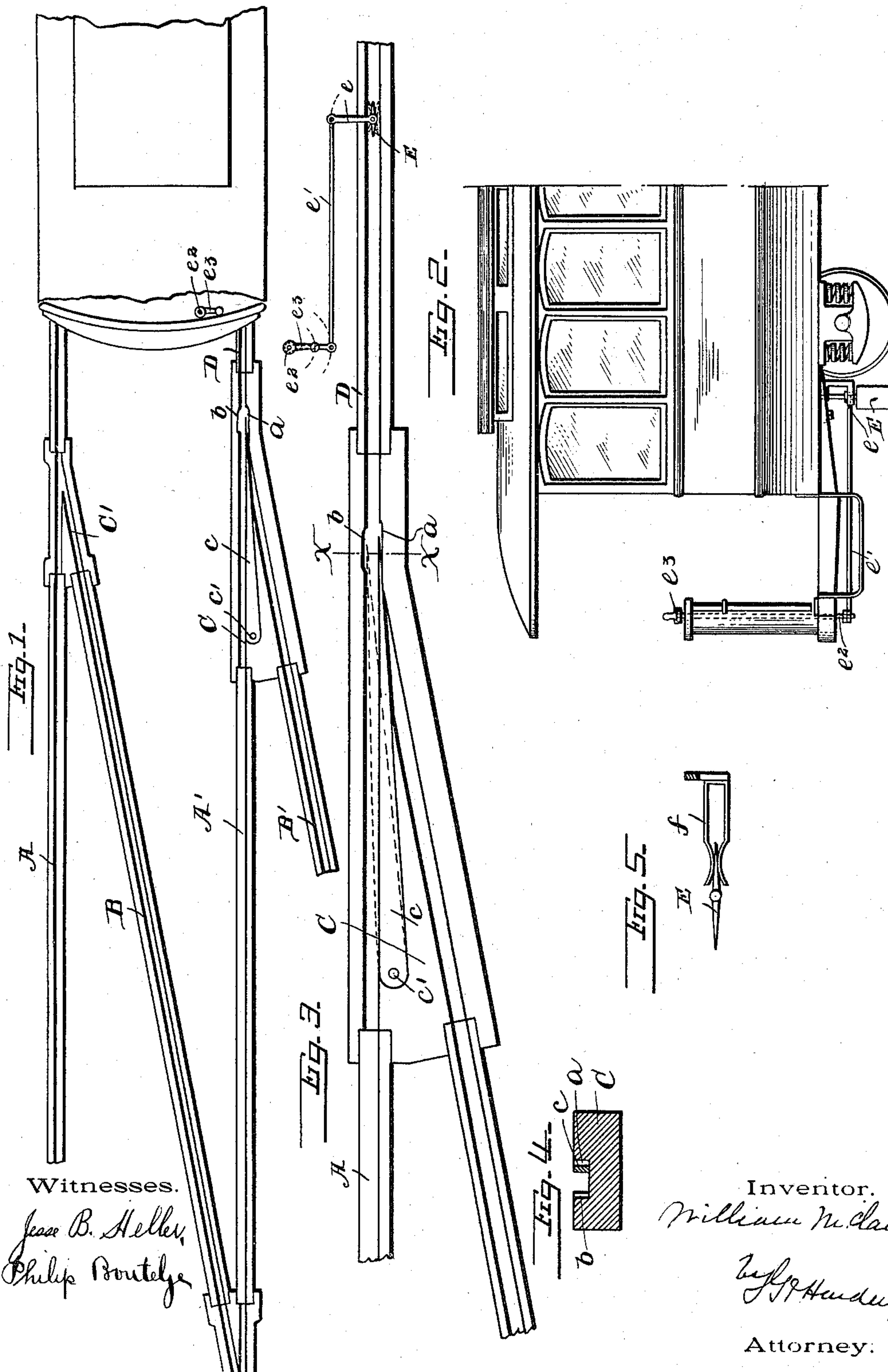


(No Model.)

W. M. CLARK.
SWITCHING DEVICE.

No. 540,232.

Patented June 4, 1895.



Witnesses.
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UNITED STATES PATENT OFFICE.

WILLIAM M. CLARK, OF PHILADELPHIA, PENNSYLVANIA.

SWITCHING DEVICE.

SPECIFICATION forming part of Letters Patent No. 540,232, dated June 4, 1895.

Application filed October 17, 1894. Serial No. 526,182. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM M. CLARK, a citizen of the United States, residing at Philadelphia, county of Philadelphia, and State of Pennsylvania, have invented a new and useful Improvement in Switching Devices, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, which form a part of this specification.

I will first describe my improvement as represented in the drawings, and then particularly point out the invention in the claim.

Figure 1 is a plan of switch and part of car. Fig. 2 is a side elevation of part of car. Fig. 3 is a detail plan. Fig. 4 is a section on line $x x$, Fig. 3. Fig. 5 is a form showing spring connected to the blade.

A A' are the through track rails; B, B', the switch rails; C, C', the switch, C being the tongue part of switch, and C' the mate.

c is the tongue pivoted at c' , and dependent upon the position of this tongue, the car continues on the through rails, or is deflected to the switch rails, B, B'.

D is the guard rail.

The rail A and the guard rail D are slightly notched at a and b , at or adjacent to the point of the tongue.

Connected to the car in such position as to be in advance of and on a line with the flange of the forward car wheels, is the blade E, projecting below the head of the rails and adjacent thereto, and upon the side of the car corresponding to the tongue. This blade is formed of a very thin sheet of metal, with tapered ends, as shown in Figs. 3 and 5, and is secured, near or at its center, to one end of the crank e , the other end of the crank being connected to the lever e' , the lever e^2 being connected to the crank e^3 , the handle of which is within the reach of the driver or operator of the car. The movement of the crank in two directions causes the blade to assume two positions, one with its forward end at an angle with the head of the through rail, and the other at an angle with the guard rail. When the car approaches the switch, if the forward portion of the blade points toward the rail against which the point of the tongue rests, it will strike between the

point of the tongue and that rail, and in the further movement of the car deflect the tongue (see Fig. 3), so that by turning the crank so that the forward end of the blade points toward the guard rail of the tongue, the switch will be operated for the through rails, and if pointed in the opposite direction for the switch rails.

The advantages of securing the blade centrally or intermediately are several in number. In the first place, the turning of the blade will cause both the front and rear ends thereof to engage opposite walls of the slot or groove formed by the two rails and thus cause the front end to engage with more certainty the switch tongue. There is no necessity for having a stop device on the car to limit the extent of turning of the blade, as is the case where, as in prior structures, the blade is secured near its end and only the front end thereof engages the slot wall; nor is it necessary, with the blade intermediately pivoted, that the blade-supporting device be absolutely rigid.

Mechanism may be applied which will normally keep the blade parallel to the track rails, and return it to the central position after having operated upon the switch. This can be done by use of the spring f (see Fig. 5) which is thrown into action when the crank is moved to turn the blade in either direction, so that the operator holds it in the position he desires, until it passes the point of the tongue. The spring will return the blade to its central position after the tongue has been acted on. The notches in the guard rail and through rail, are for the purpose of allowing the blade with certainty to get between the tongue and the head of the rail.

I do not intend to limit myself to the particular mechanism hereinbefore described, except as the same may be hereinafter specifically claimed.

It is obvious that another advantage of having the opposite ends of the blade engage opposite walls of the slot lies in the blade being adapted by this construction to clean out the switch, thus acting in the double capacity of a switch thrower and a switch cleaner.

What I claim, and desire to protect by Letters Patent, is—

In a switch thrower, the combination of a blade carried by the car in advance of the wheels and adjacent to and projecting below the head of the rail, with a supporting device
5 on the car to which said blade is secured intermediately of its edges, and mechanism to turn said blade so that its forward end points toward or away from the head of the track rail, and a spring device adapted when un-

opposed to hold said blade in a position parallel with the track rail.

In testimony of which invention I have hereunto set my hand.

WILLIAM M. CLARK.

Witnesses:

FRANK S. BUSSE,
M. FRANCES ELLIS.