

(No Model.)

2 Sheets—Sheet 1.

C. M. FITCH.
RAILROAD SWITCH.

No. 490,190.

Patented Jan. 17, 1893.

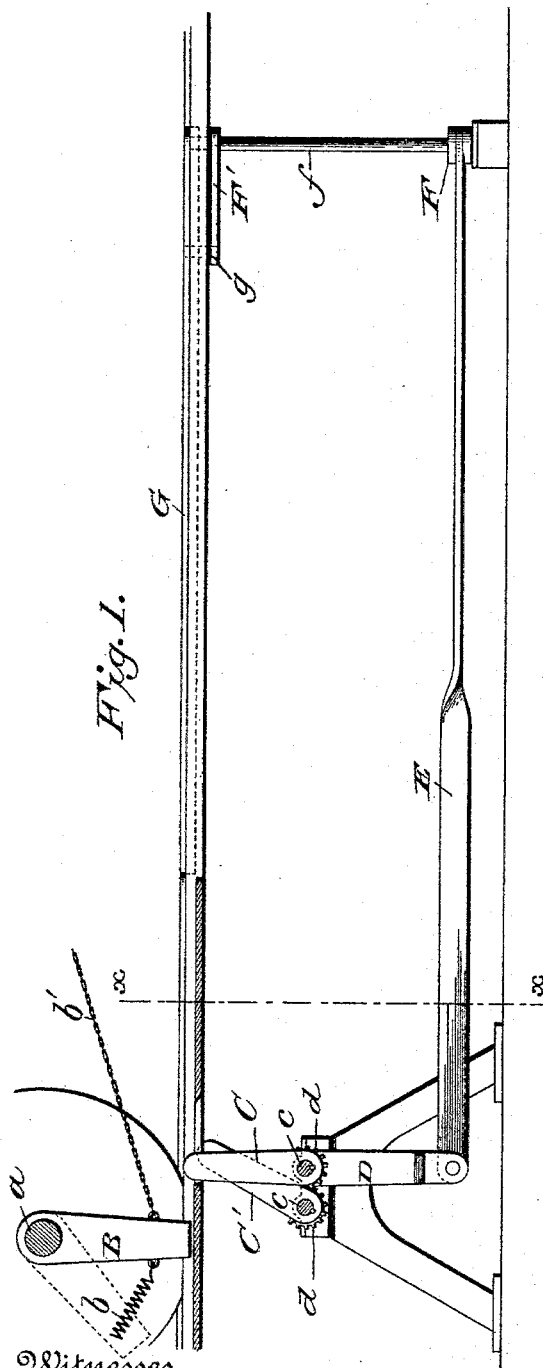


Fig. 1.

Witnesses

L. S. Elliott.

W. M. Johnson.

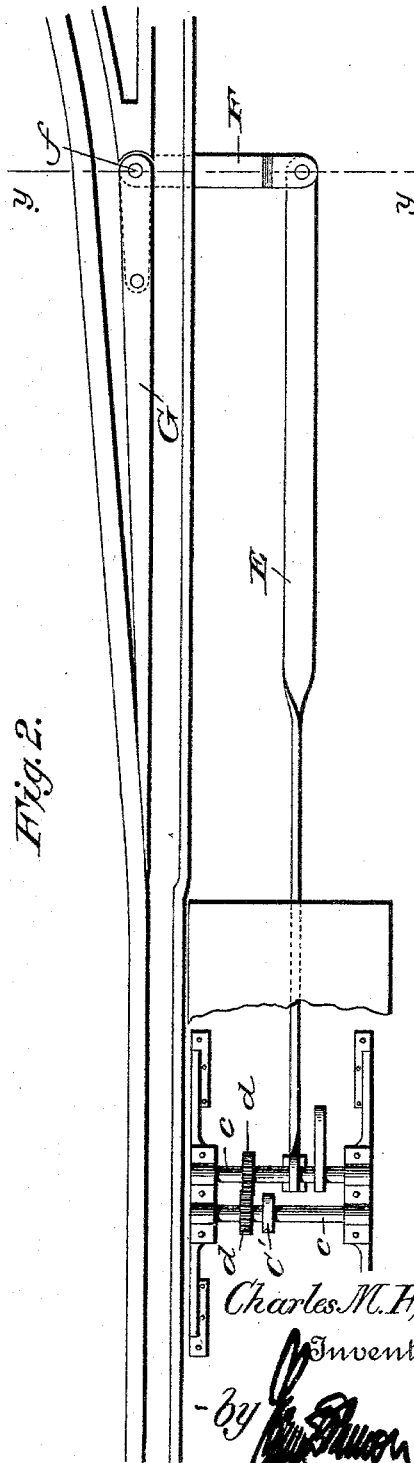


Fig. 2.

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Attorney

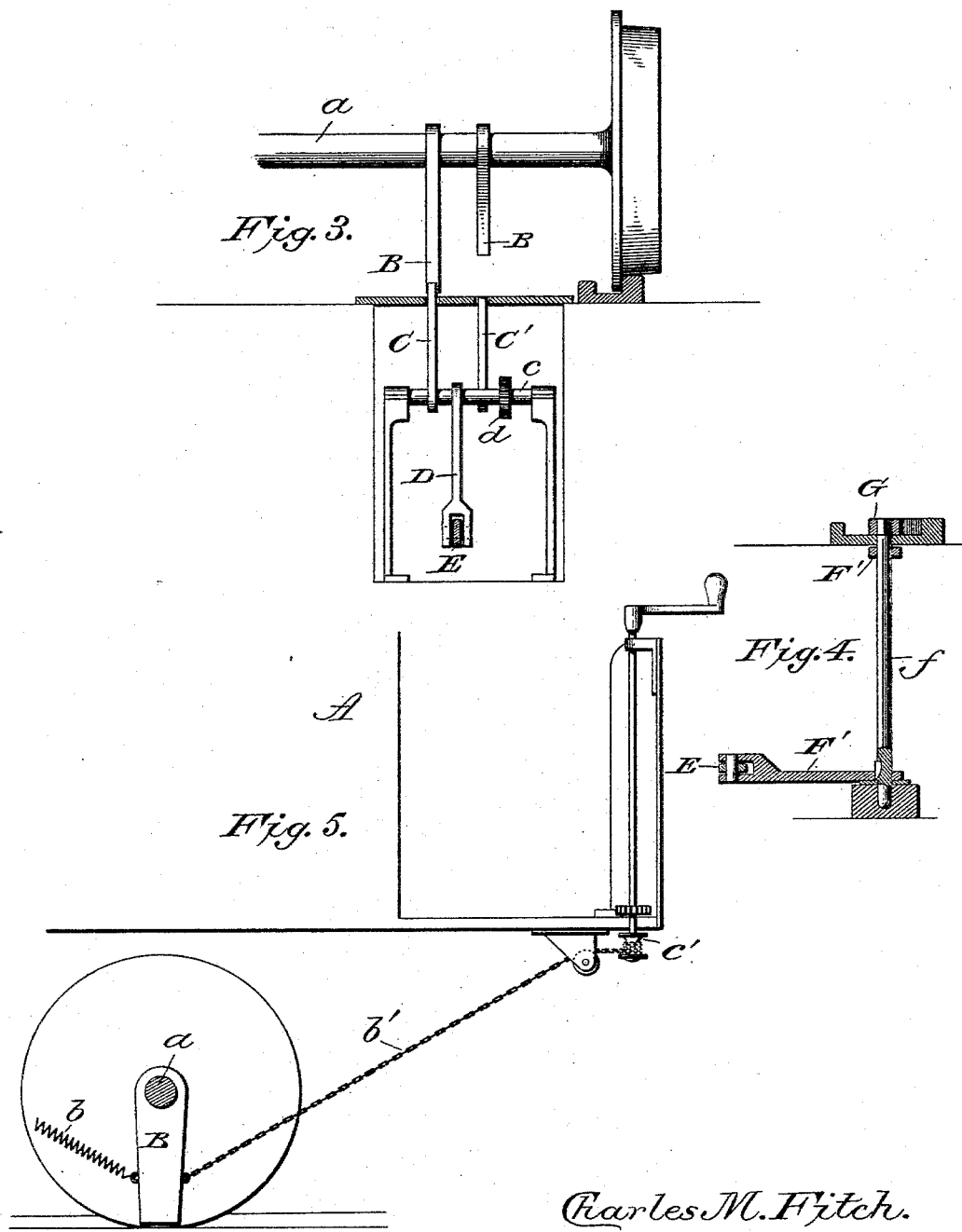
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Charles M. Fitch.

Inventor

by *[Signature]*
Attorney

Witnesses
L. S. Elliff
E. M. Johnson

UNITED STATES PATENT OFFICE.

CHARLES M. FITCH, OF SOUTH NORWALK, CONNECTICUT.

RAILROAD-SWITCH.

SPECIFICATION forming part of Letters Patent No. 490,190, dated January 17, 1893.

Application filed June 30, 1892. Serial No. 438,583. (No model.)

To all whom it may concern:

Be it known that I, CHARLES M. FITCH, a citizen of the United States of America, residing at South Norwalk, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Railroad-Switches; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

This invention relates to improvements in tramway switches.

The object of the invention is to provide a switch which is adapted to be operated by an arm carried by a car, which arm is adapted to rock a shaft to shift the switch point; and it consists in the construction and combination of the parts, as will be hereinafter fully set forth and particularly pointed out in the claims.

In the accompanying drawings forming part of this specification: Figure 1 is a side view, partly in section, showing the mechanism for operating the switch point. Fig. 2 is a plan view. Fig. 3 is a sectional view on the line $x-x$ of Fig. 1. Fig. 4 is a sectional view on the line $y-y$ of Fig. 2.

A designates a part of a car, upon the axle a of which is journaled or suitably attached arms B B, said arms being connected to the car body on one side by means of springs b , and on the other side by means of chains b' which extend from the arms over a roller to a pulley or drum carried by a vertical shaft mounted on the platform of the car adjacent to the dash-board. These arms when in a vertical position depend so as to be near the road-bed and are adapted to strike against arms or levers secured to horizontal rock shafts which are journaled in bearings below said roadbed. Upon the horizontal shafts, c c , are keyed gearwheels $d d$, which are in mesh with each other as shown, and the shaft to which the lever C is secured carries an arm D which is secured on a line with said lever, and to the lower end of this arm is connected a rod E, which extends in advance of the levers C and C' and is pivoted to an arm F rig-

idly attached to a vertical shaft f upon the upper end of which the switch point G is pivoted. The shaft f below the switch point carries an arm F', which is secured to said shaft at right angles with the arm F, and the end thereof has an upwardly projecting pin or stud g , which engages the switch point so that as the rod E is drawn upon or pushed against the switch point will be shifted.

In operation, when it is desired to shift the switch point the attendant should turn the crank shaft which carries the drum c' so as to bring one of the arms carried by the car axle to a vertical position, and the arm so manipulated will strike against one of the levers so as to shift the position of the arm D to partially turn the shaft f and thereby move the switch point. The springs b will hold the arms B in an elevated position when tension is not exerted upon the same by the chain B' attached thereto.

The switch operating mechanism hereinbefore described is especially adapted for street railway service, and being located between the tracks and below the plane thereof is not liable to get out of order.

Having thus described my invention, I claim:

1. A switch operating mechanism adapted to be located between the tracks, consisting of a frame positioned beneath the road-bed, said frame supporting parallel shafts which carry levers C and C', said levers extending through apertures in the roadbed so as to engage with switch operating mechanism carried by the car, the parallel shafts being geared to each other and connected to a rod E, a vertical shaft carrying the switch-point, and an arm projecting from said shaft and connected with the rod E, substantially as shown, and for the purpose set forth.

2. In a mechanism for operating switch points, the combination of levers C and C' mounted on shafts which are geared to each other, an arm D secured to one of the shafts the lower end of the same being connected to a rod, said rod being connected at its other end to an arm carried by a vertical shaft to which the switch point is pivoted, and an arm or lever connected to the arm f and to the switch-point, substantially as shown, and for the purpose set forth.

3. In mechanism for operating switch-
points, the combination of the switch-point G
pivotaly secured at one end to a vertical shaft
and connected with said shaft by an arm F'
5 having an upwardly projecting pin which en-
gages with the switch-point, an arm F at right
angles therewith, said arm being connected to
a rod E, a depending arm D connected to the op-
posite end of the rod E, shafts geared to each
10 other and provided with independent levers,
said levers being adapted to be projected

through openings in a cover-plate, said levers
being located out of line with each other lat-
erally so as to be operated by independent
bars carried by the car, substantially as shown. 15
and for the purpose set forth.

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

CHARLES M. FITCH.

Witnesses:

HERMAN SNYDER,
CHRISTIAN SWARTZ.