

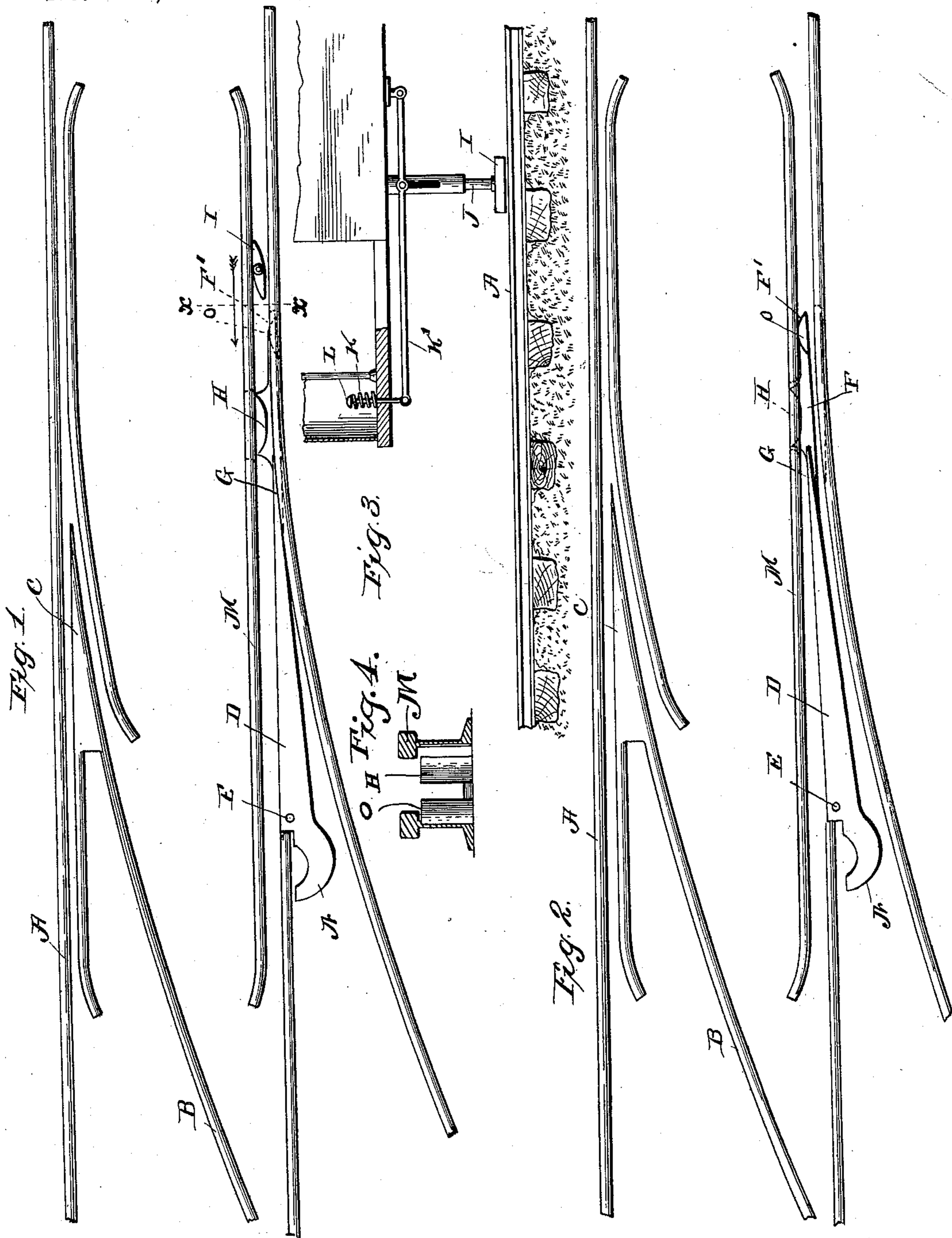
(No Model.)

M. N. SHUFFLEBARGER.

AUTOMATIC SWITCH.

No. 599,808.

Patented Mar. 1, 1898.



Witnesses
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AUTOMATIC SWITCH.

SPECIFICATION forming part of Letters Patent No. 599,808, dated March 1, 1898.

Application filed January 11, 1897. Serial No. 618,868. (No model.)

To all whom it may concern:

Be it known that I, MARION NOEL SHUFFLEBARGER, a citizen of the United States, residing at Bristol, in the county of Sullivan and State of Tennessee, have invented a certain new and useful Improvement in Automatic Switches, of which the following is a specification.

My invention relates to a new and useful improvement in railway-switches, and has for its object to provide a device of this description which shall be simple and effective in operation and which is especially adapted for use in trolley or other railways and so arranged that by the depression of a shoe by the motorman the switch may be thrown and the car permitted to pass to the branch line, and which device is adapted after the passing of the car to the branch line to be reset for the next succeeding car.

With these ends in view this invention consists in the details of construction and combination of elements hereinafter set forth, and then specifically designated by the claim.

In order that those skilled in the art to which this invention appertains may understand how to make and use the same, its construction and operation will now be described in detail, referring to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a plan of a railway having my improved switch embodied therein, the frog or point of which is so set that without disturbance the cars will remain upon the main line; Fig. 2, a similar view showing the point so set that a car will pass to the branch line; Fig. 3, an elevation of one rail of the track and a diagram of a portion of a car, showing the throwing block or shoe carried thereby; and Fig. 4 is a sectional view taken on the line $x x$ of Fig. 1 and looking in the direction of the arrow.

In carrying out my invention as here shown, A represents the main line of a trolley-road, while B represents the branch rails thereof, which are joined to the main line by the ordinary frog C and the switch-point D. The switch-point D, having the point proper, G, is pivoted at E and provided with the extension F, also having a point F'. The switch-point extension F has upon its upper side two ver-

tical convex projections or cams H O, the projection or cam H being arranged just in advance of the point G, so that when engaged by a shoe depending from the car, hereinafter referred to, it will shift said point away from the main rail, and the other cam or projection O being arranged a short interval in advance of the cam H and out of longitudinal alinement therewith, so that when the cam H is engaged and carried to one side, as the point G is shifted away from the siding, said cam O will assume such a position as to permit of its engagement by the shoe of a car keeping to the main line in the event of the motorman or the operator of a car passing to the siding failing to depress the shoe at the rear end of the car to engage the cam extension N in order to reset the switch-point F.

When the switch is in the position shown in Fig. 1, the flange of a car-wheel will pass to one side and above the points F' and G and to the opposite side of the cam H without affecting said switch, so that so long as the switch is in this position cars may freely pass to and fro along the main line without being turned therefrom; but should the switch be turned to the position shown in Fig. 2, so as to bring the point F' to the opposite side of the line of main rail, the flange of a car-wheel will then be guided from the main track to the branch track, as will be readily understood. Therefore it is only necessary to bring about the change of position of this switch to determine the direction which the car shall travel when passing in the direction of the arrow. To accomplish this result, a shoe I is placed at an angle to the line of the main rail and is secured upon the lower end of a suitable rod J, and this in turn is fitted in bearings beneath the car and attached to the lever K', which latter in turn is attached to the foot-rod, so as to normally remain elevated by the action of the spring K and yet be adapted to be depressed by the motorman or conductor by the placing of his foot upon the button L. When so depressed, the shoe will be brought below the cams H and O in order that as the car reaches the switch this shoe will so act upon the cam H as to thrust it sidewise, carrying therewith the switch until its point F' is brought adjacent to the guide-rail M. Now it is obvious that as the wheels

of the car reach this point they will be guided from the main track to the branch track without the necessity of stopping the car or bringing about the switching thereof by hand, as
5 is usual. After the wheels of the car have passed to the branch track it is necessary that the switch shall be readjusted to its original position in order that the main line may be left open, and for this purpose a cam extension N is formed upon the switch-point and
10 is so located as to be acted upon by the shoe at the rear end of the car.

From the above description it will be seen that a switch is provided which will be entirely under control from the car and will not
15 require the stopping of a car for its adjustment either in passing along the main line or to the branch line or after having so passed, and this is of great importance in the operation of trolley-lines in crowded cities, where
20 many turnouts are necessary, each of which now necessitates the stopping of the car and the adjusting of the switch by hand, all of

which is entirely overcome by the use of my improvement. 25

Having thus fully described my invention, what I claim as new and useful is—

In a railway-switch the combination of the pivoted switch-point, a cam extension at its pivoted end, an extension at its opposite end
30 provided with two cams or vertical convex projections, one arranged just in advance of the point proper, and the other cam arranged a short interval in advance of the first-named cam and to one side thereof, said cam extension and cams or projections adapted to be
35 actuated from the car, substantially as set forth.

In testimony whereof I have hereunto affixed my signature in the presence of two
40 scribing witnesses.

MARION NOEL SHUFFLEBARGER.

Witnesses:

B. S. QUAILE,
G. S. WAGNER.