No. 868,614. PATENTED OCT. 15, 1907.

L. C. McADAMS.

AUTOMATIC SWITCH FOR RAILWAYS.

APPLICATION FILED JULY 1, 1907.

Fig. 1

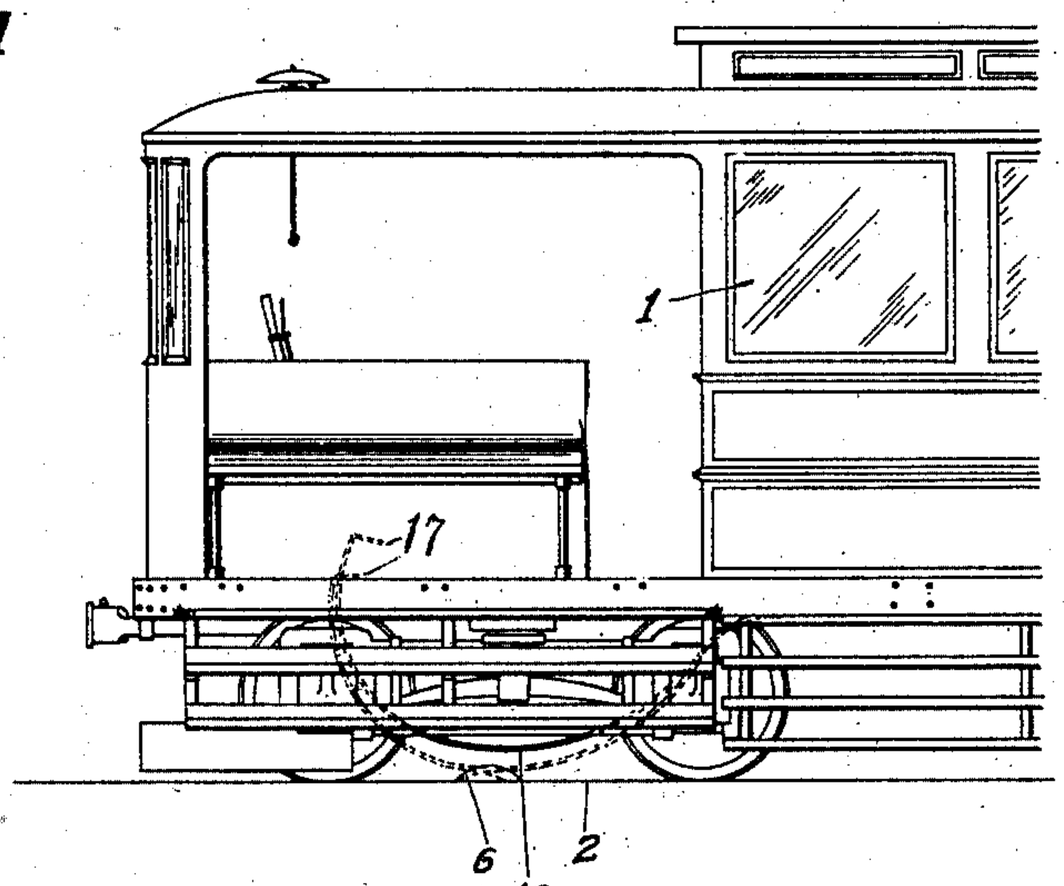

Fig. 2

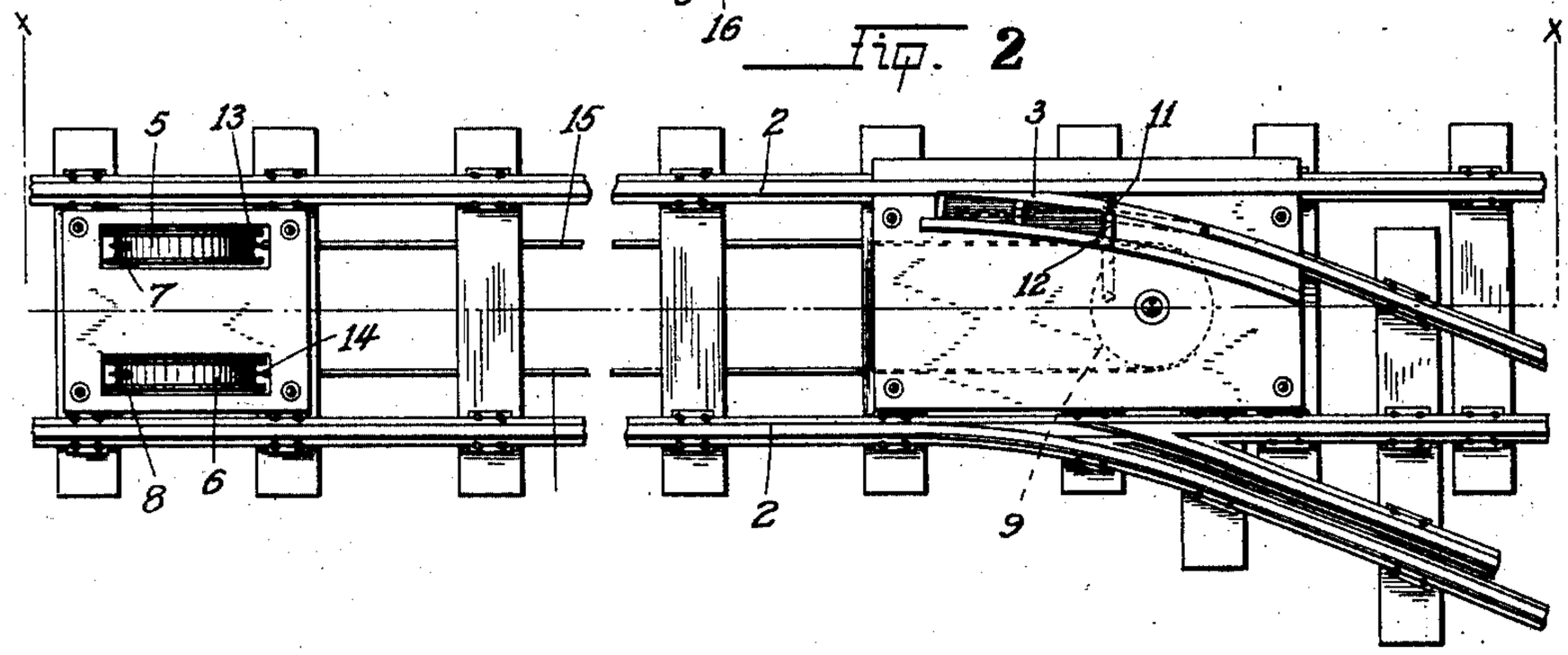

Fig. 3

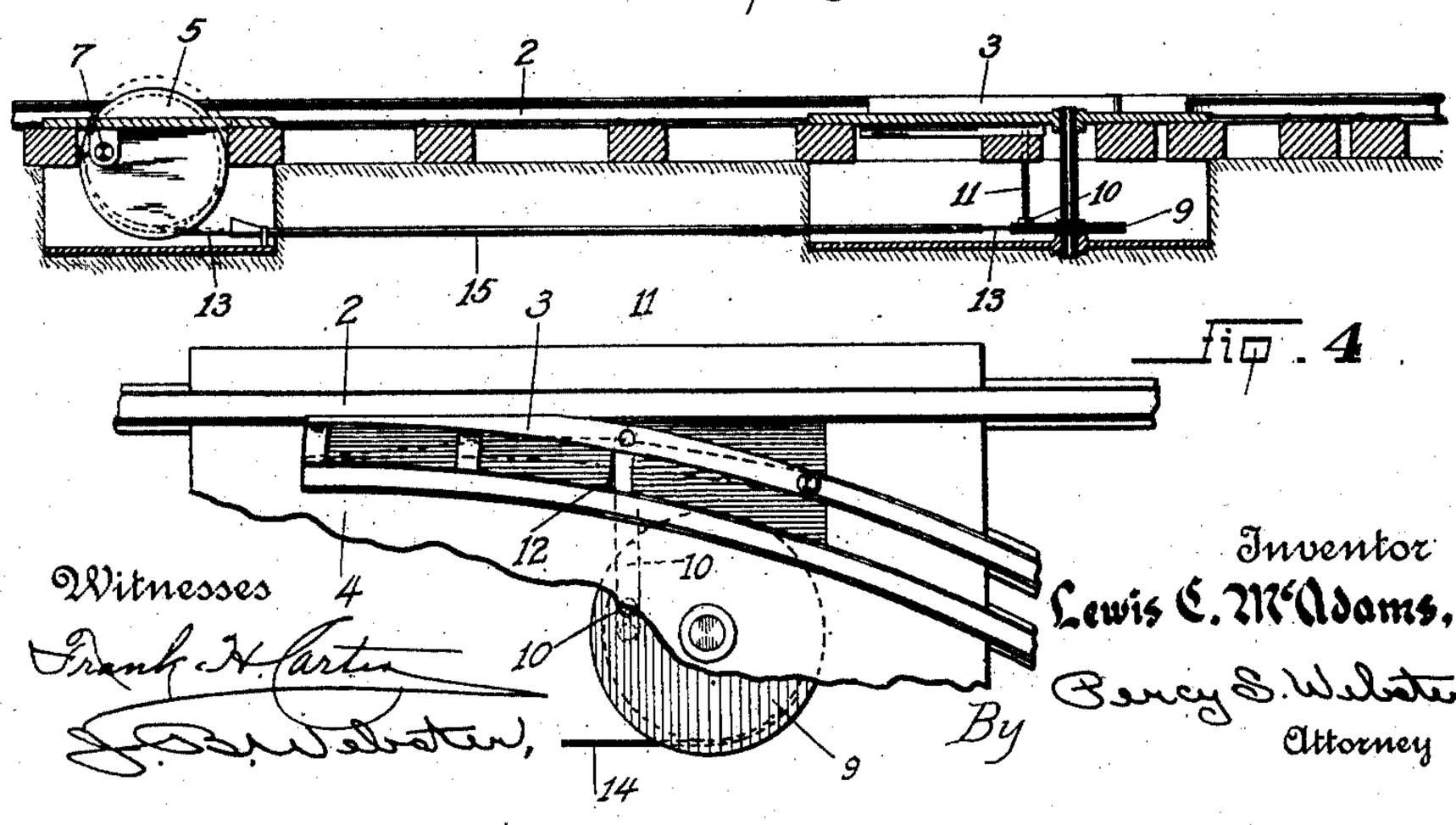

Fig. 4

Witnesses
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UNITED STATES PATENT OFFICE.

LEWIS C. McADAMS, OF SACRAMENTO, CALIFORNIA, ASSIGNOR OF ONE-HALF TO CHARLES CAMENZIND, OF SACRAMENTO, CALIFORNIA.

AUTOMATIC SWITCH FOR RAILWAYS.

No. 868,614. Specification of Letters Patent. Patented Oct. 15, 1907.

Application filed July 1, 1907. Serial No. 381,592.

To all whom it may concern:

Be it known that I, LEWIS C. MCADAMS, a citizen of the United States, residing at Sacramento, in the county of Sacramento and State of California, have invented certain new and useful Improvements in Automatic Switches for Railways; and I do declare the following to be a full, clear, and exact description of the same, 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 the characters of reference marked thereon, which form a part of this application.

This invention relates to improvements in railways and particularly to electric street railways, my object being to produce such a switch for the same as may be operated from the car without having to be done by hand as is now the case, thus saving the delay and labor caused by such present system. This object I accomplish by means of a drum and cable mechanism disposed in connection with the switch and a means on the car whereby the same may be operated from the car to throw the switch in either direction as desired; also by such other and further construction as will appear by a perusal of the following specification and claims.

In the drawings similar characters of reference indicate corresponding parts in the several views.

Figure 1 designates a fragmentary end view of a car with my improved appliance arranged thereon. Fig. 2 is a top plan view of a railway switch showing my improved mechanism applied thereto. Fig. 3 is a sectional view taken on a line $x\ x$ of Fig. 2. Fig. 4 is a fragmentary view of a switch.

Referring more particularly to the reference numerals on the drawings 1 represents a car riding on the usual rails 2.

3 designates a switch bearing on a plate 4.

Vertically disposed between the rails 2 at a distance from the approach to the switch 3 are grooved drums 5 and 6, the same being pivoted off center at 7 and 8 respectively and on the sides away from the switch 3.

Journaled horizontally under the plate 4 at a point intermediate the rails 2 is a drum 9. Pivotally mounted on said drum is an arm 10 having a pin 11 secured to its outer end and extending upward through a slot 12 in the plate 4 and secured to the switch 3.

Secured to the drums 5 and 6 at points on their outer sides are cables 13 and 14 respectively, the same extending under the bottoms of said drums then through pipes 15 to the drum 9 where they are secured.

Secured to the under side of each of the cars 1 are metal spring bands 16, the same being in substantial alinement with the drums 5 and 6. Said bands extend through the floor of the car and within reach of the motorman's feet and are provided with foot pieces 17.

In practice as the car approaches the switch if it is the desire of the motorman to keep the straight track as shown on the drawing he forces downward that band 16 which will engage with drum 5. This pushes said drum 5 downward and backward, which action causes the cable 13 to rotate the drum 9 in such manner as to pull the switch 3 into the proper position for leaving the straight track open. Vice versa when the motorman desires to make the turn he presses the band 16 which will engage with the drum 6, which action reverses the action of the drum 9 and throws the switch into such position as will permit the turn to be made.

The grooves in the drums 5 and 6 tend to hold the bands 16 in alinement therewith while performing their functions.

Thus it will be seen that I have produced a simple and inexpensive switch for railways whereby the same may be operated from within the car. This saves the time and trouble and delay of stopping and turning the switch by hand as is now the case.

While this specification sets forth in detail the present and preferred construction of my improved device, still in practice such deviations therefrom may be resorted to as fall within the scope of my claims.

Having thus described my invention what I claim as new and useful and desire to secure by Letters Patent is:—

1. In a device of the character described, a railway, a car mounted thereon, a switch in said railway, spring bands secured beneath said car, and means whereby said switch may be operated by said bands, as set forth.

2. In a device of the character described, a railway, a car thereon, a switch in said railway, spring metal bands secured to the under sides of said car at each end thereof, said band extending through the floor of the car, foot pieces on the ends projecting through said floor, and means for operating said switch with said bands, as set forth.

3. In a device of the character described, a railway, a car thereon, a switch in said railway, two drums disposed vertically between the rails of said railway at a distance from the approach to said switch, a cable mechanism connecting said drums with said switch, and means on said car for engaging with said drums whereby said switch will be operated by said cable mechanism, as set forth.

4. In a device of the character described, a railway, a car thereon, a switch in said railway, two drums pivotally disposed vertically intermediate the rails of said railway at a distance from the approach to said switch, a drum pivotally disposed horizontally beneath said switch, cables connecting said vertical drums to said horizontal drum, means connecting said horizontal drum to said switch, and

means on said car adapted to be engaged with said vertical drums, as set forth.

5. In a device of the character described, a railway, a car thereon, a switch in said railway, two pivoted drums vertically disposed between the rails of said railway at points a distance from the approach to said switch, a drum horizontally journaled beneath the said switch, cables connecting said vertical drums with said horizontal drum, an arm pivotally mounted on said horizontal drum, a pin upward from said arm and engaging with said switch, and means on said car to be engaged with said vertical drums, as set forth.

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

LEWIS C. McADAMS.

Witnesses:
FRANK H. CARTER,
PERCY S. WEBSTER.