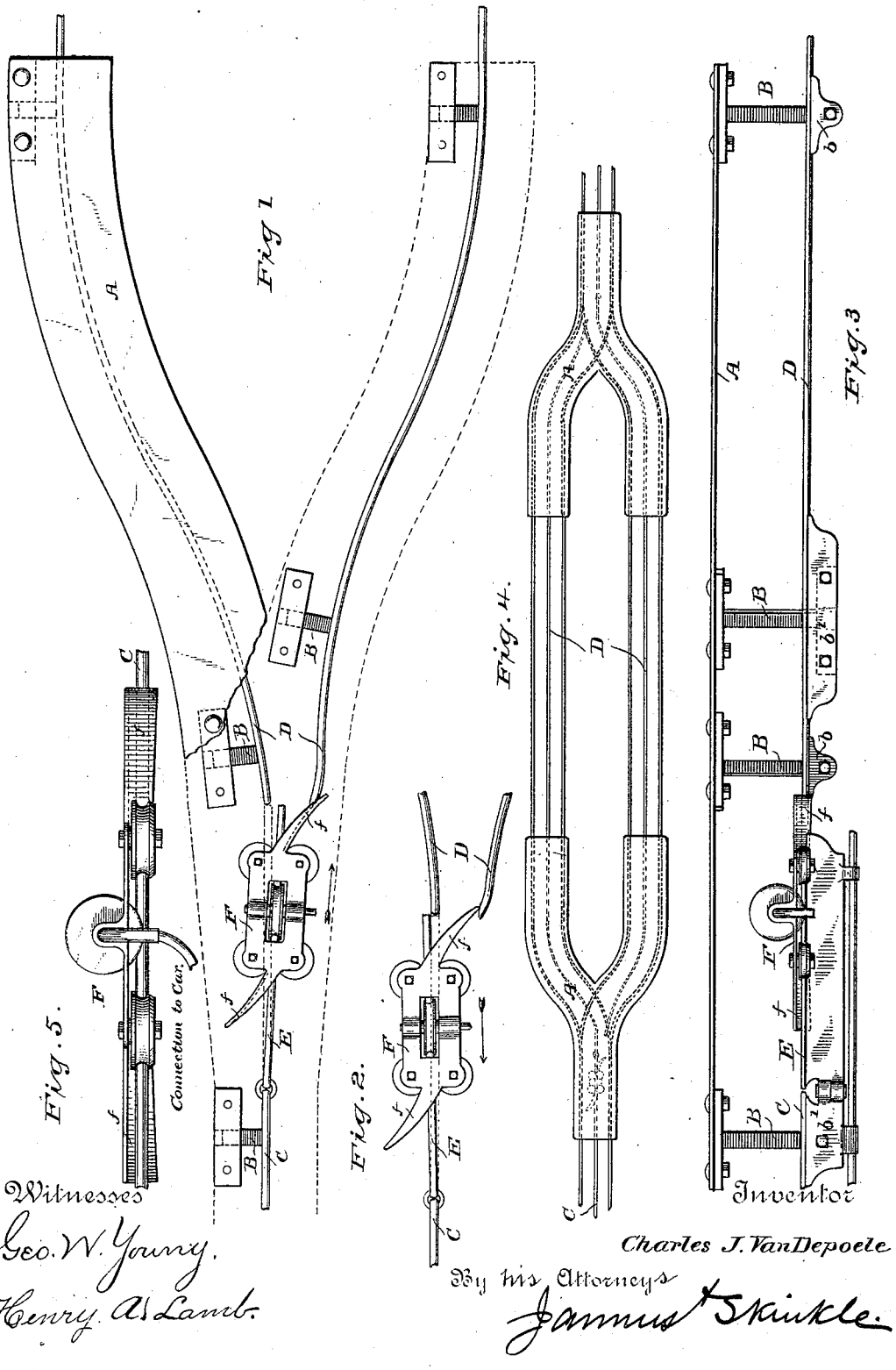
(No Model.)

C. J. VAN DEPOELE.

AUTOMATIC SUSPENDED SWITCHING DEVICE FOR ELECTRIC RAILWAYS.

No. 346,963. Patented Aug. 10, 1886.



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UNITED STATES PATENT OFFICE.

CHARLES J. VAN DEPOELE, OF CHICAGO, ILLINOIS.

AUTOMATIC SUSPENDED SWITCHING DEVICE FOR ELECTRIC RAILWAYS.

SPECIFICATION forming part of Letters Patent No. 346,963, dated August 10, 1886.

Application filed March 15, 1886. Serial No. 195,213. (No model.)

To all whom it may concern:

Be it known that I, CHARLES J. VAN DEPOELE, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Automatic Suspended Switching Devices for Electric Railways, of which the following is a description.

This invention relates to improvements in electric railways of the class in which a suspended conductor and a traveling contact dragged therealong by the car, and having branch tracks or switches, form essential features; and it consists in such construction of the traveling contact and arrangement of the switch as that the said carriage will be automatically controlled and directed in its course along said conductors in a prearranged manner, as will be hereinafter set forth in the description, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a top plan view of one end of an electric railway-switch arranged according to my invention. Fig. 2 is a detail showing the relative positions of the parts just after the carriage has passed from the fixed terminal to the tongue of the switch. Fig. 3 is a side elevation of the devices shown in Fig. 1. Fig. 4 is a top plan view on a reduced scale, showing a switch or turn-out, such as is used on a single-track city railway. Fig. 5 is a side elevation of the contact-carriage.

Similar letters denote like parts throughout.

A represents a plate of metal or a wooden or other frame-work extending in three or more directions. This plate or frame is suitably suspended, and from it depend supporting devices B, which are in permanent electrical connection, either through the metallic frame or through suitable metallic strips attached thereto, and are provided at their lower ends with upwardly-extending ears or bails *b b'*, on top of which the main conductor C and branch conductors D D are secured in any suitable manner. These portions of the system are not herein claimed, as they form part of the subject-matter of another application filed simultaneously herewith. The fixed branch conductors D terminate at points in proximity with each other; but the main conductor C terminates before reaching them, and is provided with an extension in the form of a hinged tongue, E, which projects forward, and is spring-held in the desired normal position, which is that shown in the diagram, Fig. 4, the said tongue being movable laterally in either direction.

The traveling contact F is preferably constructed as shown in my other application above referred to—that is, so far as its contact-wheels and frame are concerned—although almost any form of horizontal carriage would answer the present purpose, in accomplishing which I provide each end of the carriage with a curved projection or horn, *f*, which may be formed integral with or be attached to the frame of the carriage, and must be of sufficient depth to insure their being at all times in the path of the conductor, notwithstanding slight irregularities therein. The horns *f* extend from both ends of the carriage and in opposite directions, and their extreme tips extend laterally a trifle farther than the horizontal contact-wheels of the carriage, so that wherever the horns pass the wheels will be sure to without touching.

In operation, the carriage passing along the main conductor toward the switch, Fig. 1, cannot pass through the space between the fixed ends of the branch conductors D, and its forward horn therefore engages the outer side of the conductor to the right of the carriage, and being unable to pass or free itself, the tongue E is deflected, carrying the carriage with it until it meets the said conductor, and the carriage, impelled by its connection with the car below, passes from the tongue thereonto. The support being arranged to free the same side of all the conductors throughout their length, the horns pass unobstructed and leave the opposite end of the switch without difficulty, the tongue being there already in line with the conductor carrying the carriage. On emerging from a switch, as just described, the action will be as shown in Fig. 2, and as the carriage leaves the fixed conductor and passes onto the tongue said tongue will be slightly deflected outward, in order to allow the rear horn to pass out between the fixed terminals D. Since, as indicated, the said horns extend outwardly somewhat farther than the space between the fixed terminals, in order to catch on

the outside of or to lap the right-hand fixed terminal on entering a switch, the rear horn must strike or rub against the inside of the left one on leaving it, and as all of the wheels of the carriage will be upon the tongue before said horn becomes pinched between the fixed terminals, as the space narrows the tongue will be moved to the right and the carriage make a perfectly smooth and easy exit.

Sundry details of construction are shown in the drawings and not particularly described herein, as they are fully referred to and claimed in the contemporaneous application before referred to.

I do not confine myself to the exact constructions shown and described, as various changes and modifications can be made in the above-mentioned devices without departing from the spirit of my invention.

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

1. In an electric-railway system, the combination, with main and branch conductors and suitable switches from one to the other, of a traveling contact provided with projections adapted to lap the extremities of the desired switches, and thereby to deflect the said carriage thereonto, as set forth.

2. In an electric-railway system, a contact-carriage provided with curved horns *f*, extending endwise therefrom, substantially as shown and described.

3. In an electric-railway system, the combination of a contact-carriage formed with horns or projections extending endwise therefrom, a main track or conductor having a pivoted tongue or switch, a fixed curved portion, with which the tongue is normally in line, and a fixed switch track or conductor having its extremity curved inward toward the extremity of the main track or conductor, substantially as shown and described.

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

CHARLES J. VAN DEPOELE.

Witnesses:
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