

(No Model.)

2 Sheets—Sheet 1.

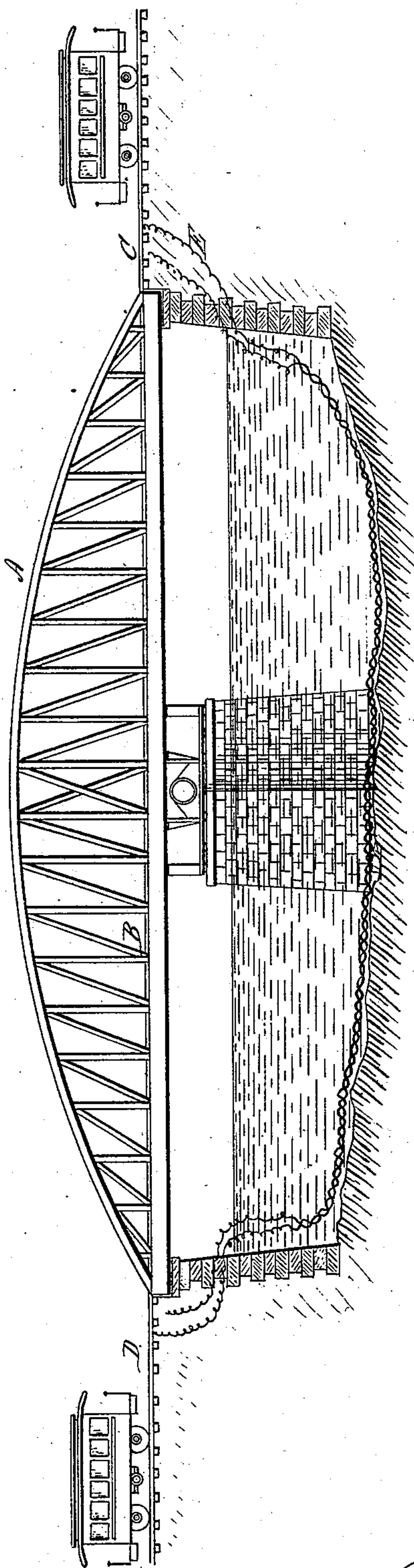
L. DAFT.

CONDUCTOR FOR ELECTRIC RAILWAYS.

No. 289,897.

Patented Dec. 11, 1883.

Figure 1.



Witnesses:  
Court A. Cooper,  
Josephine Campbell,

Inventor  
Leo Daft  
By his attorneys  
Foster & Freeman,

(No Model.)

2 Sheets—Sheet 2.

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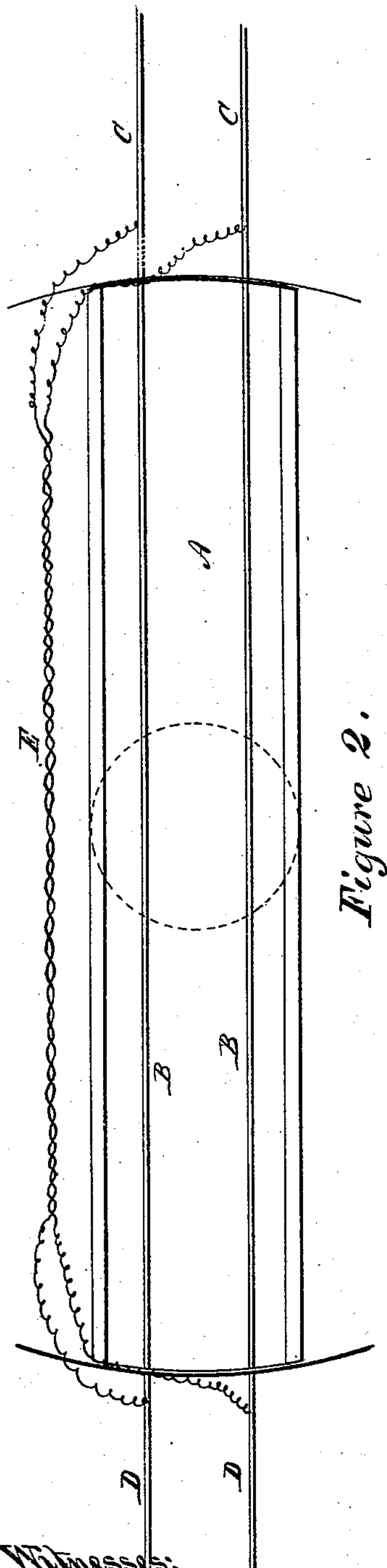


Figure 2.

Figure 3.

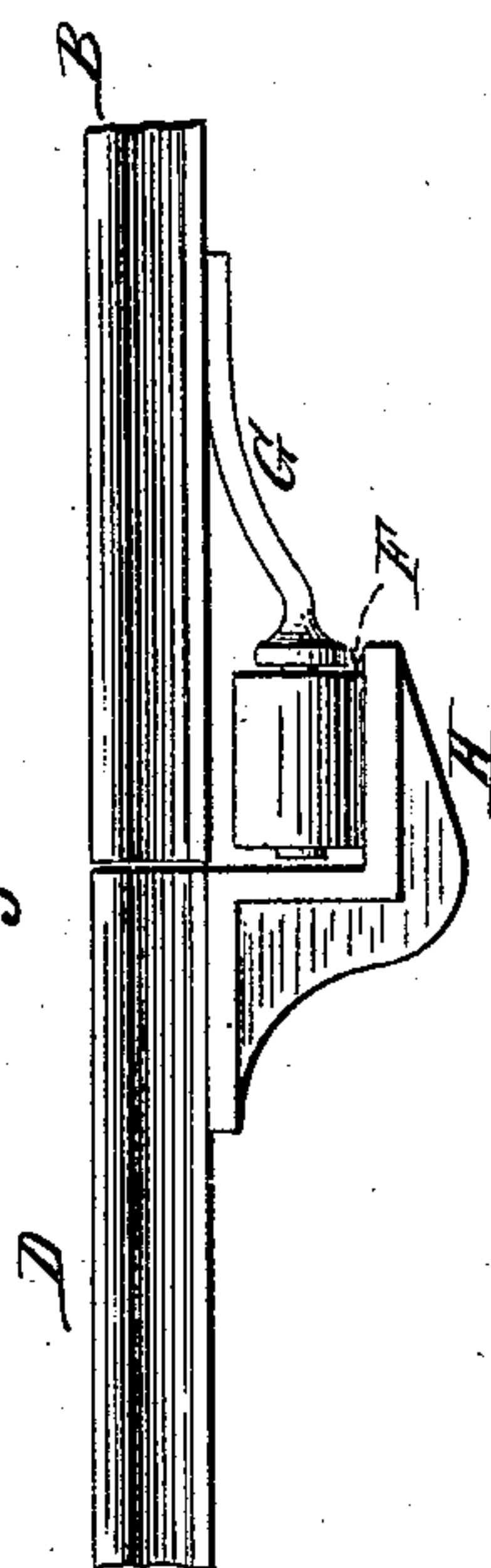


Figure 4.

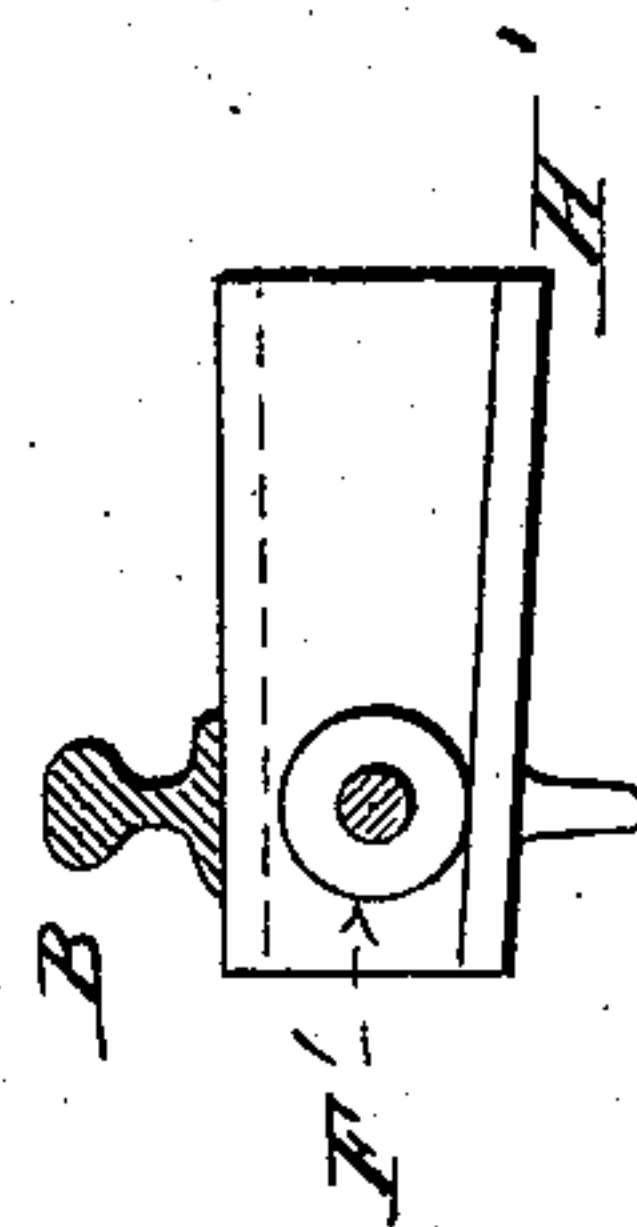
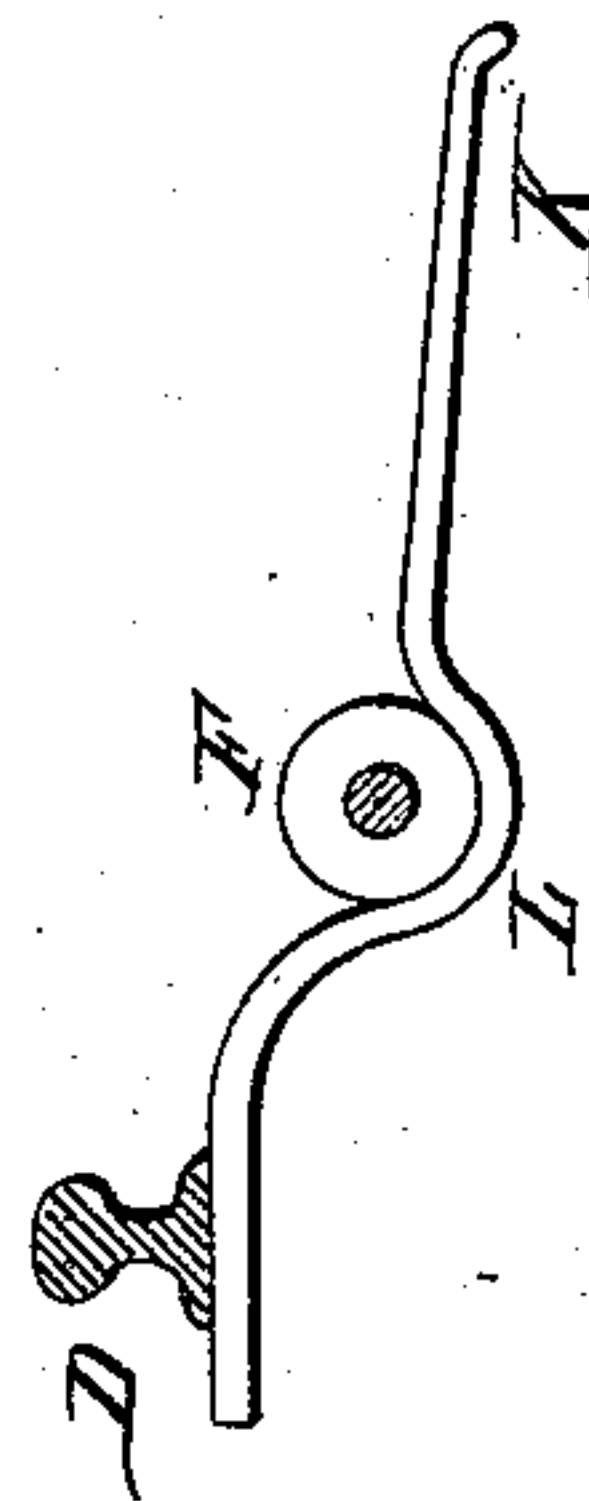


Figure 5.



Witnesses:  
Court. A. Cooper.  
Josephine Campbell.

Inventor:  
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By his Attorney,  
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# UNITED STATES PATENT OFFICE.

LEO DAFT, OF GREENVILLE, NEW JERSEY.

## CONDUCTOR FOR ELECTRIC RAILWAYS.

SPECIFICATION forming part of Letters Patent No. 289,897, dated December 11, 1883.

Application filed June 14, 1883. (No model.)

*To all whom it may concern:*

Be it known that I, LEO DAFT, a subject of the Queen of Great Britain, and a resident of Greenville, New Jersey, have invented a new and useful Improvement in Conductors for Electric Railways, of which the following is a full, true, and exact description, reference being had to the accompanying drawings.

The object of this invention is to insure continuous transmission of energy over an electric-railway system where the rails are used as conductors, and is especially intended to maintain such continuity when draw-bridges, turntables, or other obstructions are required to be operated without interrupting travel.

My invention will be readily understood from the accompanying drawings, in which similar letters refer to similar parts.

Figure 1 represents a general perspective elevation of a draw-bridge with the connecting-rails; Fig. 2, a plan view of the same; Figs. 3, 4, and 5, detailed views of apparatus connecting the rails of the draw-bridge with the main-line circuit.

In systems of this kind it is intended that the current shall be transmitted on the rails themselves; but my invention is not limited to conductors formed of the rails themselves, but is applicable to other forms.

A represents a draw-bridge of any ordinary construction. D D represent the rails carrying the power from the dynamo; B B, the rails upon the draw-bridge, and C C the main-line rails upon the opposite side of the bridge from the rails D D. The rails C C and D D are connected by a suitable cable, as shown, of such low resistance as not seriously to reduce the electric energy transmitted therethrough. By these conductors E E, continuous metallic connection is at all times maintained, whether the draw be opened or closed.

It is obviously necessary, in order that a car may be impelled while upon the draw, that a connection between the rails of the draw and the main-line rail should be made when the draw is closed. This may be accomplished in many ways. I have shown several of them in Figs. 3, 4, and 5.

In Fig. 3, D represents the main rail; B, the draw-bridge rail. F represents a roller supported upon a spring, G, and adapted to roll upon a platform, H, electrically connected

with rail D. This platform should be inclined, so that when the bridge is closed the roller F may roll up upon it and make an electrical contact between the rail B and the rail D. In Fig. 4 the same arrangement is shown, excepting that the platform H' moves with the bridge, and the roller F' is stationary. Two of these connectors should be provided, one for each rail. They may be arranged at different heights, so as not to interfere with each other in opening or closing the draw-bridge. In Fig. 5 another form of connector is shown. The roller F in this case need not be supported upon a spring, but is adapted to roll up upon the spring K, which is electrically connected with the main rail D. In this case a flexure, L, may be provided in the spring, allowing the roller F to rest thereon when the bridge is closed. Other forms of connectors may be employed; but they should be such as to insure certainty of connection between the rails B B and the rails D D when the draw-bridge is closed. It will be obvious that the connectors between the draw-bridge rails and the track-rails need only be used at one end of said draw-bridge rails; but they may be used at both ends, if desired.

It is obvious that when in this specification I refer to rails I mean to include likewise any other form of conductors for transmitting the electric energy to the moving motor.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination of the rails or conductors carrying the electric energy from the generator, a swinging draw-bridge or equivalent device having rails or conductors upon it, and an electrical connection between the two, consisting of a platform attached to one and a roller attached to the other, whereby the circuit is opened and closed as the draw-bridge is operated.

2. The combination of the rails or conductors carrying the electric energy, a draw-bridge or equivalent device carrying rails or conductors, and a platform attached to one and a spring-supported roller attached to the other, whereby good electrical contact is insured, substantially as described.

3. The combination, with the rails or conductors of an electric railway, of a draw-bridge or similar device carrying rails or conductors,

an independent conductor for completing the circuit around the draw-bridge, and connecting devices for completing the circuit to the conductors on the bridge.

- 5 4. The combination, with rails or conductors D D and C C, of the permanent connection E, platforms H, a draw-bridge, A, carrying rails B B, electrically connected to the rails D D, and spring-supported rollers F, elec-

trically connected to the rails upon the draw- 10 bridge, adapted to complete the electric connection between the rails B B and D D when the draw is closed, substantially as described.

LEO DAFT.

Witnesses:

GEO. H. EVANS,  
WM. POLLOCK.