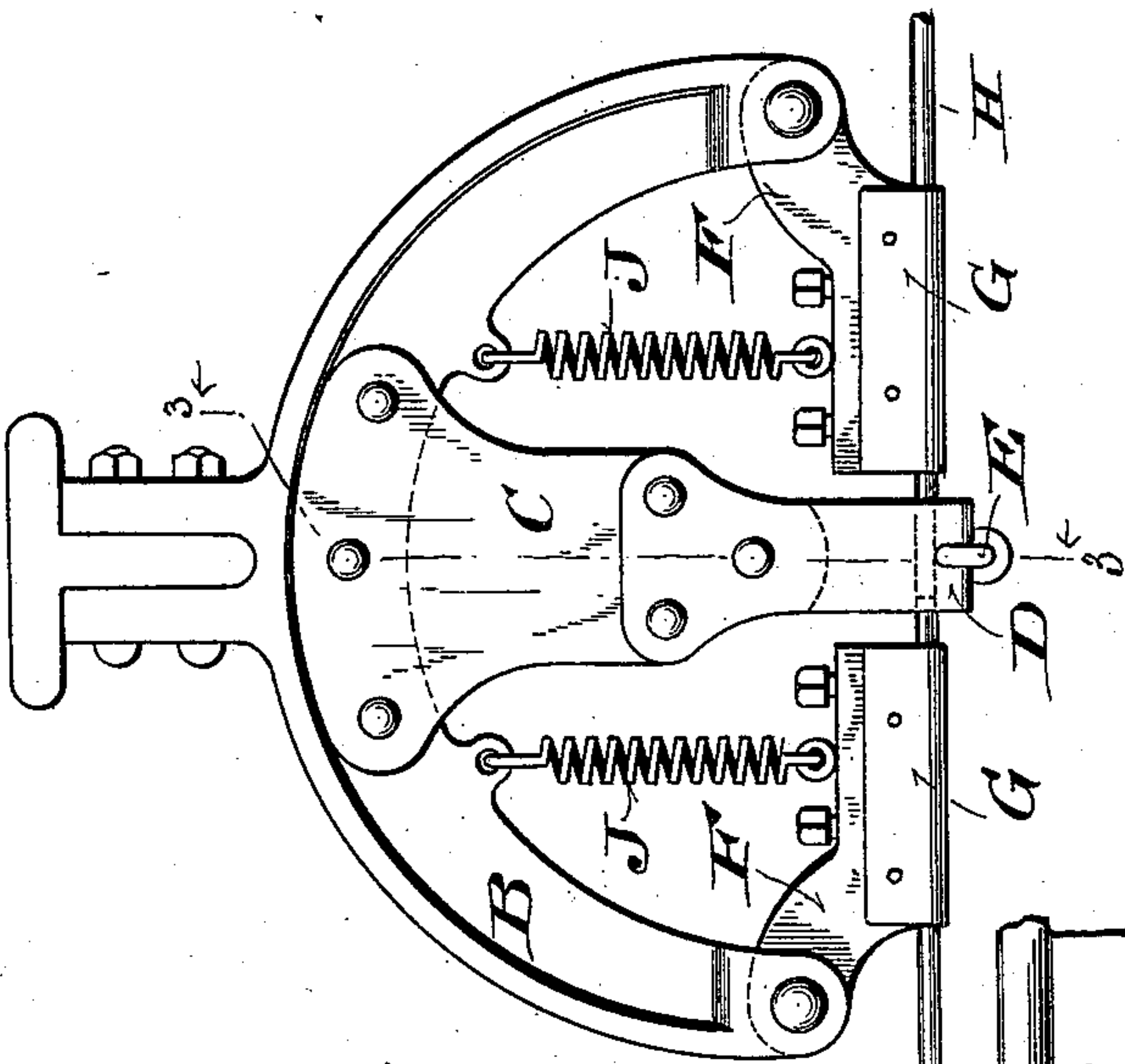


(No Model.)

S. HOENINGER.  
ELECTRIC RAILWAY.

No. 540,664.

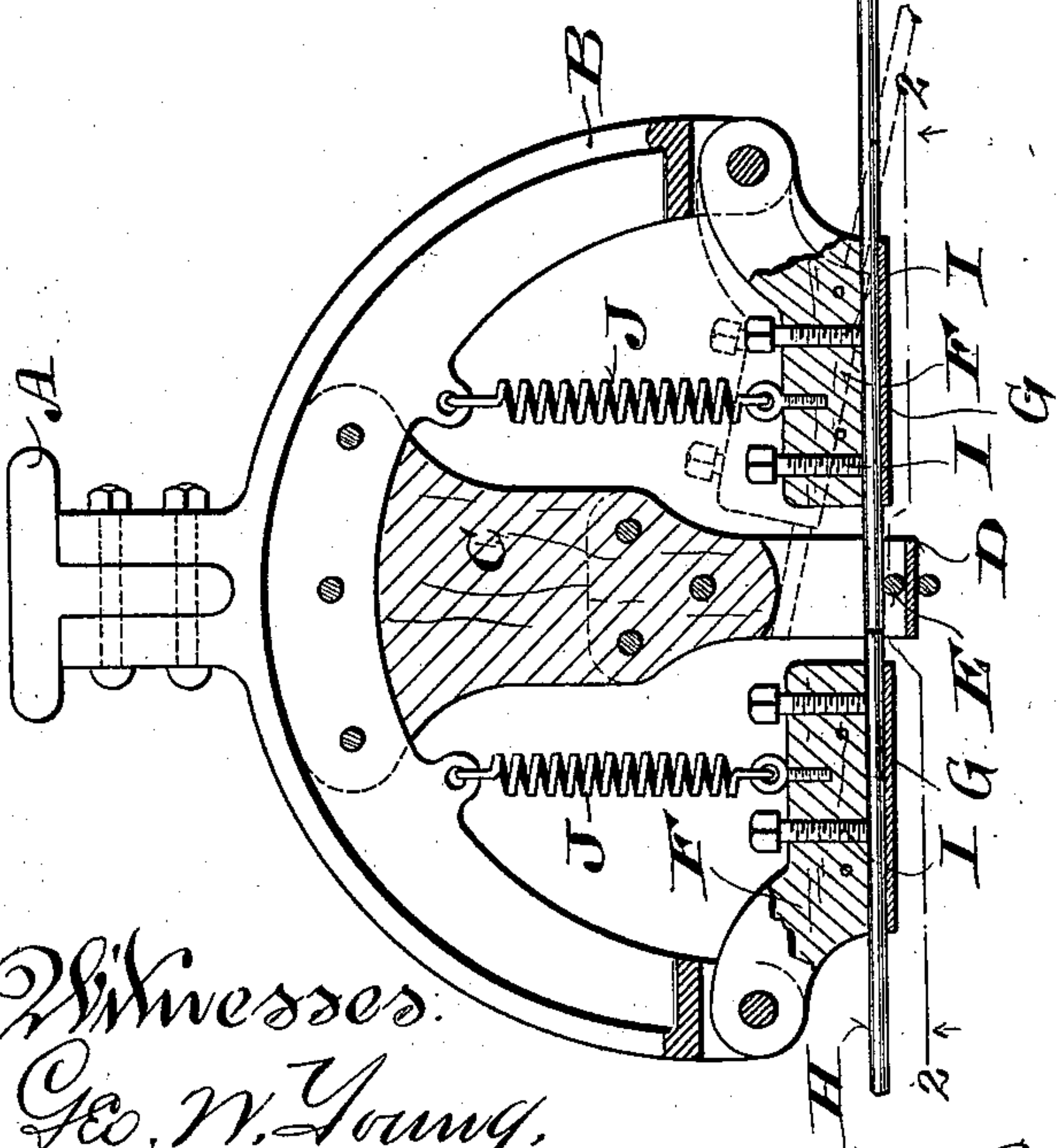
Patented June 11, 1895.



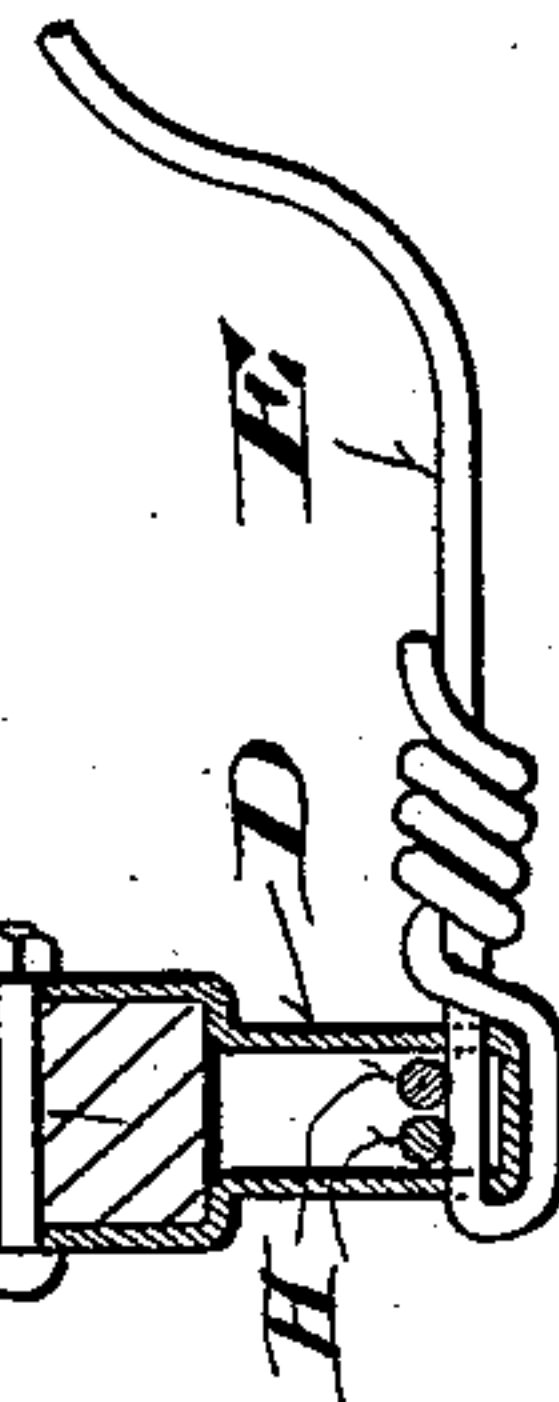
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



Witnesses:  
Geo. W. Young.  
N. E. Oliphant

By

Inventor:  
S. Hoeninger  
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Attorneys



# UNITED STATES PATENT OFFICE.

SEBASTIAN HOENINGER, OF MILWAUKEE, WISCONSIN.

## ELECTRIC RAILWAY.

SPECIFICATION forming part of Letters Patent No. 540,664, dated June 11, 1895.

Application filed August 15, 1894. Serial No. 520,350. (No model.)

*To all whom it may concern:*

Be it known that I, SEBASTIAN HOENINGER, a citizen of the United States, and a resident of Milwaukee, in the county of Milwaukee, and in the State of Wisconsin, have invented certain new and useful Improvements in Electric Railways; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention has for its object to automatically and instantly cut-off electric-current from a broken trolley-wire to thereby prevent injury to man or beast that may come into contact with such a wire; and said invention consists in certain peculiarities of construction and combination of parts hereinafter specified with reference to the accompanying drawings and subsequently claimed.

In the drawings, Figure 1 represents an elevation, partly in section, of a portion of an electric-railway system embodying my improvements; Fig. 2, a view taken on line 2 2 of the preceding figure, and Fig. 3 a partly-sectional view on line 3 3 of the first figure.

Referring by letter to the drawings, A represents a lateral arm of a post in a trolley-system electric railway. Bolted or otherwise rigidly secured to the post-arm is a depending yoke B and likewise connected to the yoke central of the same is a block C of hard wood, vulcanized fiber or other suitable insulating material. Depending from the insulating block is a loop-like hanger D held in place by bolts or other suitable means, and a feed-wire branch E is shown extended through the hanger transverse of the same, said wire being returned on itself.

Pivotaly connected to the ends of the yoke B to extend toward the hanger D are elbow-blocks F of insulating material, and bent metal plates G are made fast to said blocks to form stirrups for sections H of a trolley-wire. The trolley-wire sections are clamped in their stirrups by screws I engaging the elbow-blocks and meeting ends of said sections lap each other on the feed-wire branch above specified to thereby complete the circuit.

As a matter of preference, I employ spiral-springs J in connection with the yoke B and elbow-blocks F pivoted thereto, these springs being under tension when said blocks are in normal position or in other words with their

major portions horizontal and below the pivots. The trolley-wire being in sections and hung in the manner set forth there will be a tilt of at least one of the elbow-blocks F in case said wire is fractured and thus the circuit will be broken, this result being assured by the pull of the spring attached to said block.

While I have shown the trolley-wire sections in contact with feed-wire branches, my invention is just as applicable in those electric railway systems that do not employ a feed-wire, but depend on the trolley-wire to conduct the current, and it will be readily understood from the foregoing that no injury will result to man or beast coming into contact with a broken section of said trolley-wire, inasmuch as the same is dead the instant the break occurs.

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

1. In an electric railway system, the combination of a suspended yoke, an insulated hanger central of the same, insulators pivoted to the ends of the yoke, and trolley-wire sections secured to these pivotal insulators to normally lap each other in the insulated hanger, substantially as set forth.

2. In an electric railway system, the combination of a suspended yoke, an insulated hanger central of the same, insulators pivoted to the ends of the yoke, a spring under tension between each pivotal insulator and said yoke, and trolley-wire sections secured to the pivotal insulators to normally lap each other in the insulated hanger, substantially as set forth.

3. In an electric railway system, the combination of feed-wire branches, a trolley-wire comprising a series of meeting sections lapping each other on the feed-wire branches, and pivotal supports for the trolley-wire sections, substantially as set forth.

4. In an electric railway system, the combination of insulated hangers, feed-wire branches extending through the hangers transverse of the same, a trolley-wire comprising a series of meeting sections lapping each other on the feed-wire branches, and pivotal supports for the trolley-wire sections, substantially as set forth.

5. In an electric railway system, the com-

5 bination of suspended yokes centrally provided with insulated hangers, feed - wire-branches run through the hangers transverse of the same, insulators pivoted to the yoke-ends, and a trolley-wire comprising a series of sections joined to the pivotal insulators to lap each other on the feed-wire branches, substantially as set forth.

10 6. In an electric railway system, the combination of suspended yokes, centrally provided with insulated hangers, feed - wire branches run through the hangers transverse of the same, spring-controlled insulators piv-

oted to the yoke ends and a trolley-wire comprising a series of sections joined to the pivotal insulators to lap each other on the feed-wire branches, substantially as set forth. 15

In testimony that I claim the foregoing I have hereunto set my hand, at Milwaukee, in the county of Milwaukee and State of Wisconsin, in the presence of two witnesses. 20

S. HOENINGER.

Witnesses:

H. G. UNDERWOOD,  
HENRY DANKERT.