No. 701,925. Patented June 10, 1902.

T. NORTH.

TROLLEY CROSSOVER.

(Application filed Sept. 4, 1901.)

(No Model.)

Fig. 1.

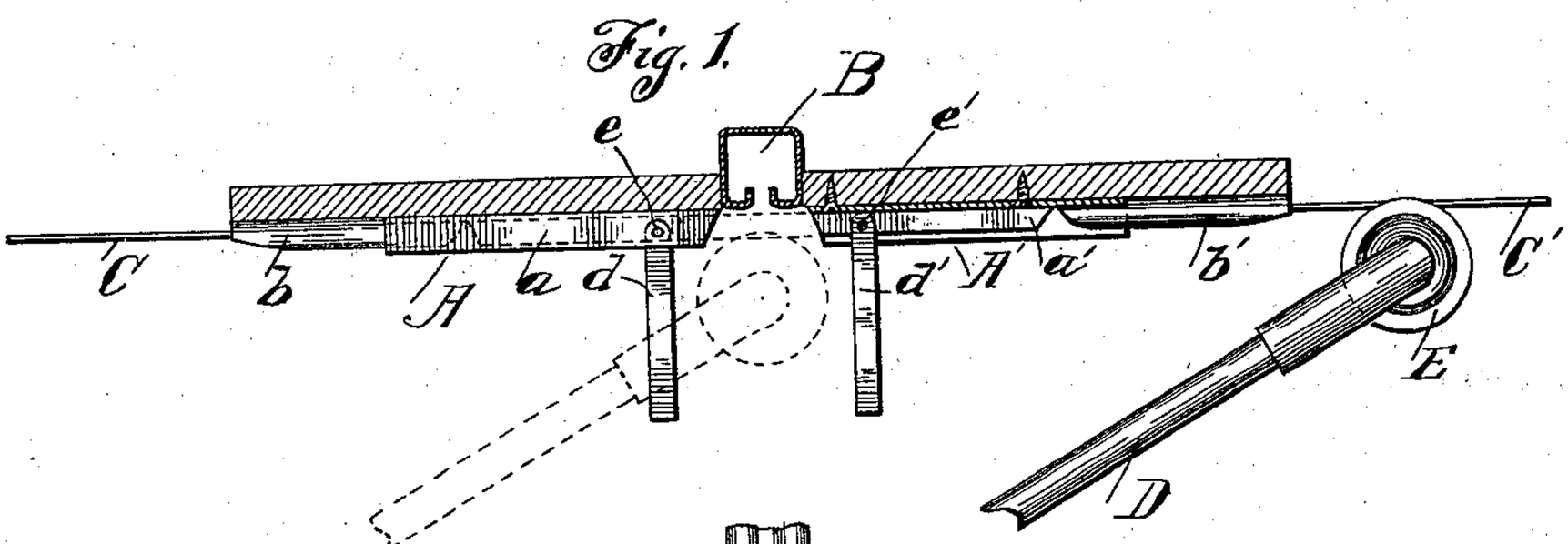


Fig. 2.

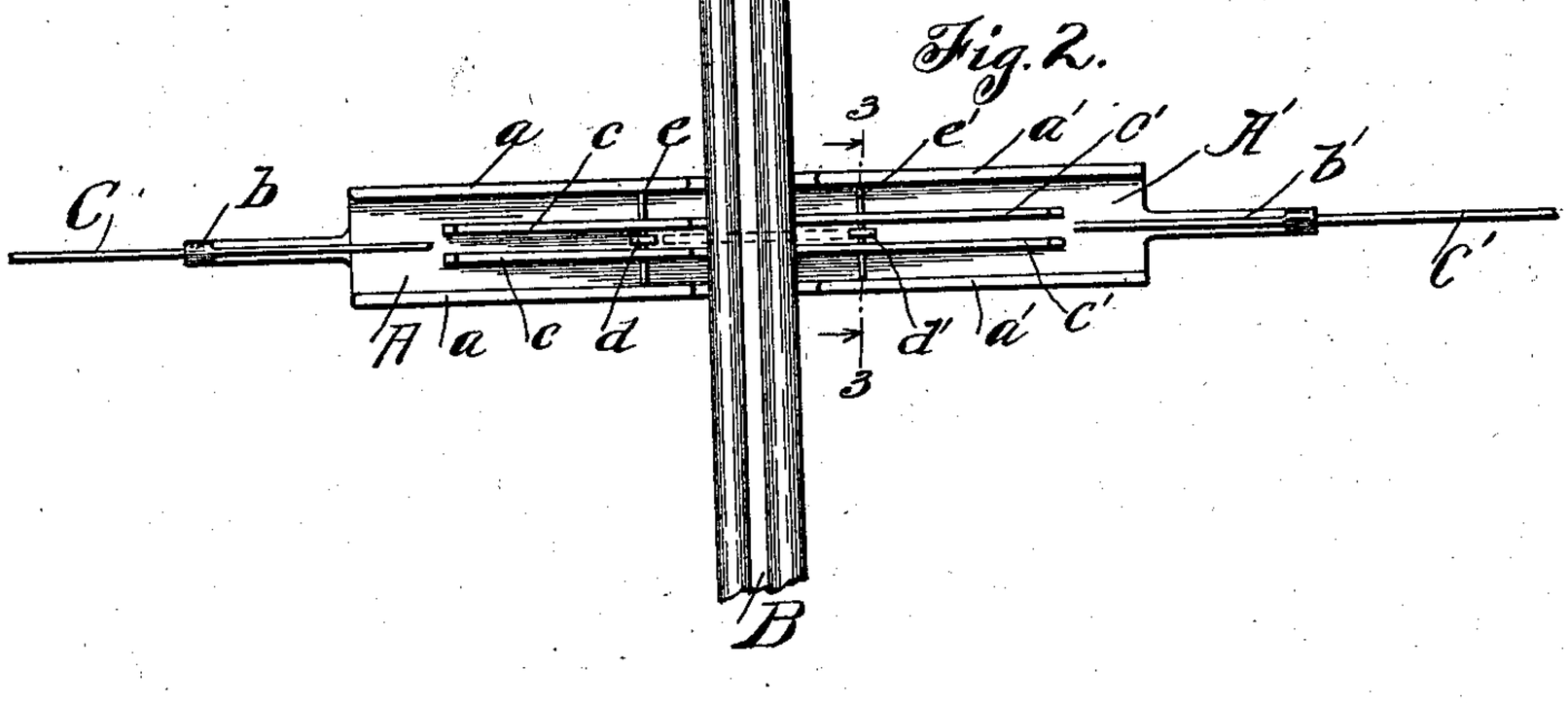
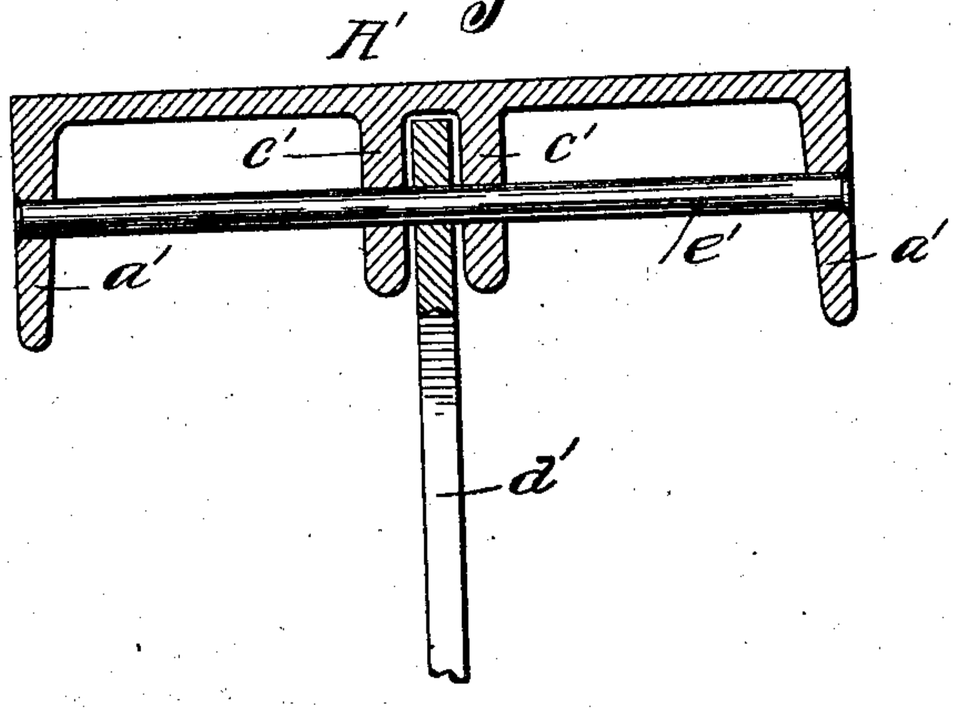


Fig. 3.



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UNITED STATES PATENT OFFICE.

THEODORE NORTH, OF AURORA, ILLINOIS, ASSIGNOR TO WILCOX MANUFACTURING COMPANY, OF AURORA, ILLINOIS, A CORPORATION OF ILLINOIS.

TROLLEY-CROSSOVER.

SPECIFICATION forming part of Letters Patent No. 701,925, dated June 10, 1902.

Application filed September 4, 1901. Serial No. 74,266. (No model.)

To all whom it may concern:

Be it known that I, THEODORE NORTH, a citizen of the United States, residing at Aurora, in the county of Kane and State of Illinois, have invented certain new and useful Improvements in Trolley-Crossovers, of which the following is a specification, reference being had to the accompanying drawings.

In car-barns the door-opening through which the cars pass in and out is usually provided with a sliding door or doors suspended from an overhead track extending entirely across the door-opening. In the use of electric cars provided with trolleys for contacting an overhead wire it is frequently necessary for the conductor of a car to pull the trolley out of contact with the wire just before such trolley reaches the barn-door opening when the car is passing into or out of the barn in order that such trolley may not strike against the track over the doorway and cause injury to either the trolley or said track or both, and after passing through the doorway the trolley must be so manipulated as to cause it to engage its wire on the opposite side of the doorway.

It is the object of my invention to provide means whereby the trolley of an electric car will be automatically directed when passing through such doorway from its wire on one side of such doorway to the alined wire on the opposite side thereof, thereby rendering any attention on the part of any one on the car to the trolley at that time unnecessary any more than at any time when the car is being propelled along any part of the line.

Another object of my invention is to permit the automatic withdrawal from across the track over the doorway of the device upon which the car-trolley crosses the said track, such withdrawal being accomplished immediately after the passage through the doorway of the car-trolley.

I accomplish these objects by the means shown in the drawings and hereinafter particularly described.

That which I regard as new will be pointed out in the claims.

In the accompanying drawings, Figure 1 is a side view of my improvements, partly in elevation and partly in section. Fig. 2 is an under side view; and Fig. 3 is a view, being a cross-section at line 3 3 of Fig. 2.

Referring to said drawings, A indicates a plate adapted to be screwed or otherwise firmly secured at one side of a doorway, with one end (which may be termed the "inner" end) approaching closely to the edge of the opening in which the door-hanger track is placed. In the form of construction shown this plate is provided with two depending side pieces *a a*, giving to the plate the appearance of a wide shallow channel-plate.

b indicates a socket secured to or formed with the plate at its opposite or outer end and adapted to have secured therein one end of the wire that the car-trolley engages, said socket being so formed as to adapt it to receive the car-trolley and guide it along the longitudinal center of the plate as it passes from such wire.

c c indicate two ribs on the surface of the plate A and arranged longitudinally thereof, which ribs engage and receive the car-trolley as it passes from the surface of the socket *b* and guide such wheel along the plate.

d indicates a bar pivoted at one end to the plate A in such manner as to permit said bar to be freely swung in either direction, so as to lie parallel with the surface of the plate or substantially so. In the form of construction shown such swinging attachment of the bar *d* is by means of a pin *e*, passing through said bar and ribs and secured in the side pieces *a a*. The point of attachment of this swinging bar *d* is located a short distance from the inner end of the plate, and the bar *d* is to be long enough to bridge or extend across the under face of the door-hanger track. On the other side of the door-hanger track and in line with the plate just described is located another and exactly similar plate equipped with parts and connections exactly like those described, this said second-mentioned plate and its parts and connections being marked with corresponding reference-letters with the addition of a prime character to each.

B indicates the door-hanger track hereinbefore referred to, the same being in the form of construction shown of the well-known tu-

bular style, the sides of which are inturned to form rails for the wheels of the door-hanger to run upon. It will of course be understood that any other well-known form of door-hanger track may be employed.

C C′ indicate trolley-wires connected, respectively, with the plates A A′.

D indicates an ordinary trolley-pole with a trolley E on the upper end thereof.

Assuming the plate A to be the one on the inside of the car-barn and that a car equipped with an ordinary trolley is running on the wire C′, such trolley would as it reached the socket *b′* ride up on such socket and onto the ribs *c′ c′* and in its passage would press against the pivoted bar *d′*, causing such bar to assume a substantially horizontal position, thus furnishing a crossover or bridge across and under the track B, on which the car-trolley can pass over without touching the said track B. The continued movement of the car will cause the trolley to force the pivoted bar *d* on the plate A to turn, it lying when so turned between the ribs *c c*, over which ribs the trolley runs to the socket *b* and thence onto the wire C. From the arrangement shown and described it is evident that whether a car is passing from the wire C to the wire C′, or vice versa, the track B will not be contacted by the trolley, but that, on the contrary, a perfect crossover or bridge will in each instance be provided by one of the pivoted bars. The bar first engaged by the trolley will when it has been turned substantially horizontal have its free end between the inner ends of the ribs of the opposite plate, which will tend to hold it more rigidly as a crossover or bridge.

It is evident that as soon as a car-trolley has passed the free end of the bar that acts as a crossover or bridge such bar will by its own weight drop back into a vertical position, thus leaving the track B unobstructed at all times except when a car is passing in or out of the barn, thereby enabling the barn-door to be closed without any delay after the passage through the doorway of a car.

While the invention is primarily designed for the purpose stated, it is evident that it might be put to other uses and also changed in matters of detail without departing from the spirit of my invention.

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

1. The combination with the plate A having depending sides *a* and intermediate ribs *c*, of means for attaching at one end a trolley-wire, and a swinging rod *d* located near the opposite end of the plate between the ribs *c* and held in place by a pin *e* passing through it and through said ribs, substantially as specified.

2. The combination with the plate A provided with ribs *c*, of means for attaching at one end a trolley-wire, and a swinging rod located near the opposite end of the plate between the ribs *c* and held in place by a pin *e* passing through it and through said ribs, substantially as described.

3. In combination, a plate having a socket at one end adapted to receive a trolley-wire, ribs integral with the plate, a rod, and a pin passing through the rod and ribs for pivotally connecting the former to the latter.

4. In combination, a plate, ribs integral therewith, means for attaching one end of a trolley-wire to the plate, a swinging rod, and means for pivotally connecting the rod between the ribs.

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