(No Model.)

B. F. COMSTOCK.

ELECTRIC RAILWAY.

No. 515,654. Patented Feb. 27, 1894.

Fig. 1

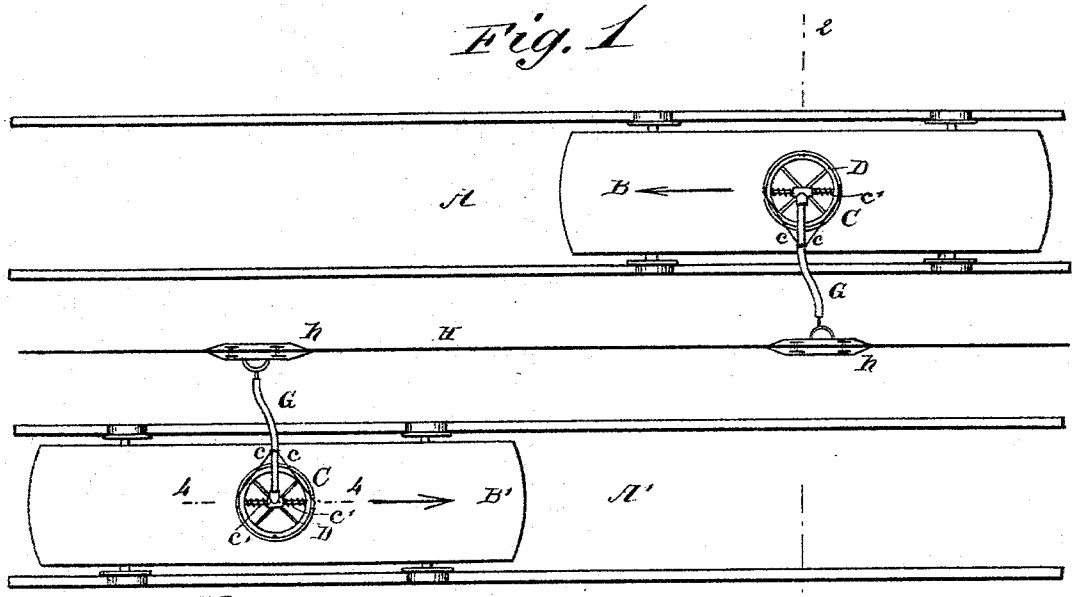


Fig. 5.

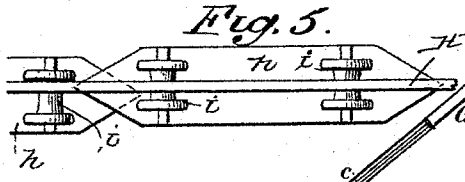


Fig. 6.

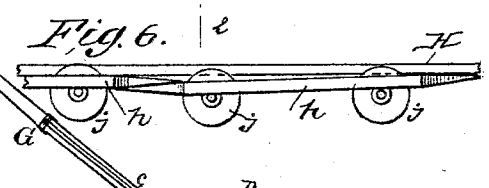
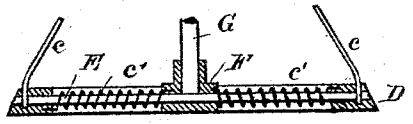


Fig. 2.

Fig. 3
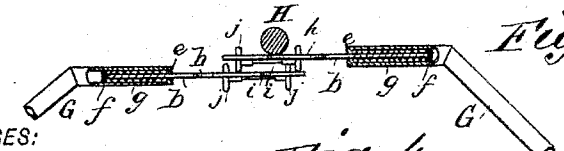


Fig. 4



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BENJAMIN F. COMSTOCK, OF DECATUR, ILLINOIS.

ELECTRIC RAILWAY.

SPECIFICATION forming part of Letters Patent No. 515,654, dated February 27, 1894.

Application filed April 13, 1893. Serial No. 470,216. (No model.)

To all whom it may concern:

Be it known that I, BENJAMIN F. COMSTOCK, of Decatur, in the county of Macon and State of Illinois, have invented a new and useful Improvement in Electric Railways, of which the following is a specification, reference being had to the annexed drawings, forming a part thereof, in which—

Figure 1 is a plan view of a railway constructed according to my improvement. Fig. 2 is a vertical transverse section taken on line 2—2 in Fig. 1. Fig. 3 is an enlarged detail view of the trolleys. Fig. 4 is an enlarged detail view of the turn-table by which the trolley is carried. Fig. 5 is an enlarged plan view of two trolleys passing each other; and Fig. 6 is a side elevation of the same.

Similar letters of reference indicate corresponding parts in all the views.

The object of my invention is to construct a double track electric railway, in which the cars on both tracks will be enabled to take current from a single trolley wire, and in which the trolleys of two passing cars may pass each other without injury.

My invention consists in the combination, with a double track railway and cars running thereon, of a trolley wire common to both railways, and trolleys attached to the cars and capable of running on the wire and of passing each other as the cars pass, all as will be hereinafter fully described.

The tracks A, A′, are of the usual construction, and are grounded in the ordinary way. The cars B, B′, running on the said tracks are also constructed in the usual way and provided with motors connected with their axles. To the top of each car is secured an annular frame C, provided with a channeled rim *a*, to which is fitted the circle D which carries the rod E, extending diametrically across the circle. On the said rod is placed a T-head F. In the said head, at right angles to the rod E, is inserted an arm G, which is angled and bored at its free end to receive the rod *b*. To the arm G are attached braces *c*, which are pivoted to the circle D, at diametrically opposite points and opposite the axis of the rod E. The circle D is perforated, and to the frame C is attached a spring-pressed bolt *a*′, which locks the circle D in either of the two positions in which it may be placed. On the rod E are placed spiral springs *c*′, which are attached to the T-head F, and also to the circle D, and are placed under torsion so as to lift the arm G and hold it in the position of use. The arm G at its free end is provided with a cap *e*, which fits the rod *b* and allows it to slide freely into or out of the end of the arm G. The rod *b* is supplied with a collar *f*, between which and the cap *e* is placed a spiral spring *g*. The outer end of the rod *b* is forked and attached to the edge of a metallic plate *h*, the said plate being provided with rollers *i*, one at either end, having flanges or wheels *j* at opposite ends of the rollers. The ends of the plate *h* are tapered or pointed as shown in Figs. 5 and 6; so as to permit a pair of trolleys moving in opposite directions to pass each other, the points of the plates being so small as to be free from liability of catching.

In the normal working of the trolley the spring *g* holds the plate *h* and rollers *i* in a median position. The trolley arm G is held in an elevated position by the torsional springs *c*′, *c*′. When two trolleys meet, the rollers of one trolley engage the plate *h* of the other trolley, and force it downward so that instead of riding on the wire H, it rides over the plate *h* of the other trolley, as shown in Fig. 3, and when one trolley passes the other in the manner described, it replaces itself automatically on the wire.

By means of my improvement I greatly economize in the construction of trolley railways, by dispensing with one wire, while at the same time the trolley itself is not rendered more complicated than those of the ordinary type.

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

1. In a trolley railway, the combination, with a double track and the electric cars adapted to run thereon, of a single trolley wire, and trolleys provided with rollers and pointed plates carried by the cars and adapted to run upon and pass each other on the single trolley wire, substantially as specified.

2. The combination, with the trolley arm G provided with the yielding rod *b*, of the plate *h* having pointed ends and provided with rollers *i*, having wheels or flanges at the ends of the rollers, substantially as specified.

3. In an electric car, the combination of a circular frame C secured to the car roof, the circle D arranged to turn in the frame and provided with a transverse rod E, the trolley arm G provided with a T-head fitted loosely to the transverse rod, and torsional springs adapted to hold the trolley arm in the position of use, substantially as specified.

BENJAMIN F. COMSTOCK.

Witnesses:
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