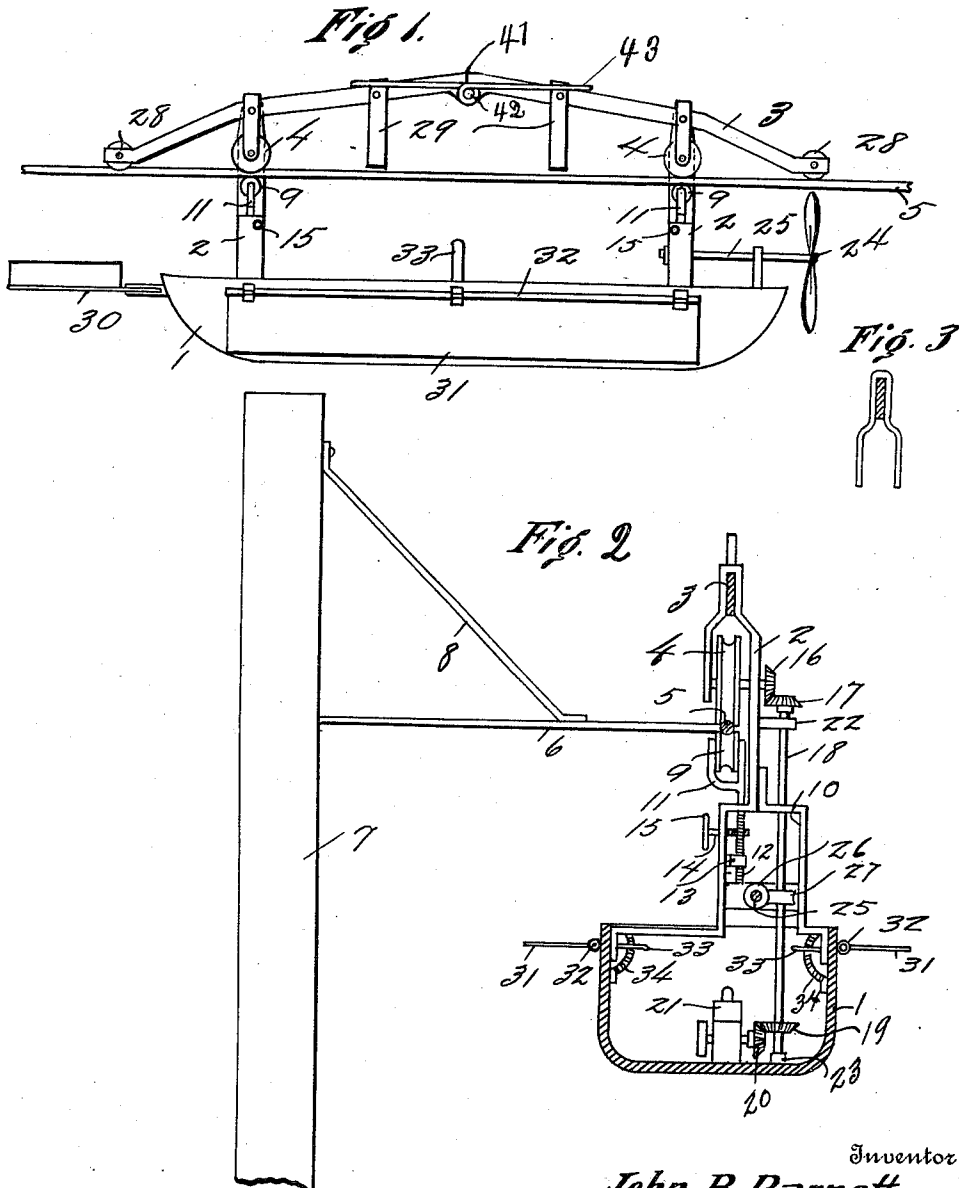


J. B. BARNETT.
RAPID TRANSIT CAR.
APPLICATION FILED JULY 10, 1911.

1,030,274.

Patented June 25, 1912.

2 SHEETS-SHEET 1.



Witnesses
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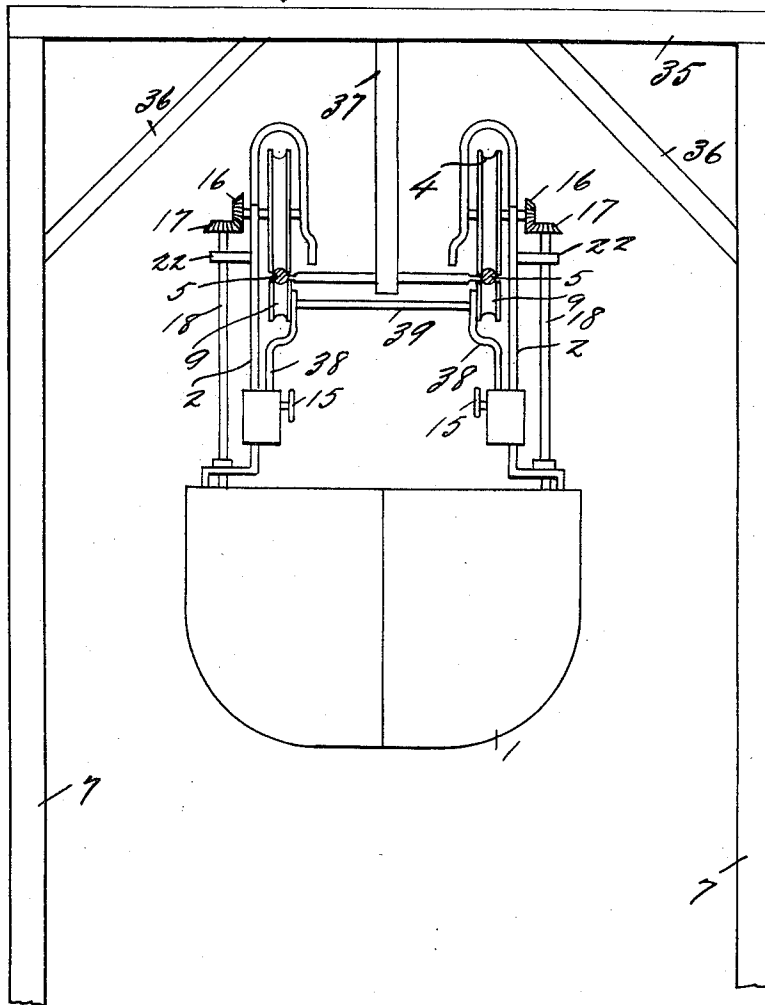
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Fig. 4.



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UNITED STATES PATENT OFFICE.

JOHN B. BARNETT, OF FORT WORTH, TEXAS, ASSIGNOR OF ONE-HALF TO JOHN W. DAVIS, OF FORT WORTH, TEXAS.

RAPID-TRANSIT CAR.

1,030,274.

Specification of Letters Patent.

Patented June 25, 1912.

Application filed July 10, 1911. Serial No. 637,788.

To all whom it may concern:

Be it known that I, JOHN B. BARNETT, a citizen of the United States, residing at Fort Worth, in the county of Tarrant and State of Texas, have invented certain new and useful Improvements in Rapid-Transit Cars, of which the following is a specification.

My invention relates to trolley cars and more particularly to cars which run on wires or cables suspended above the earth, and the object is to provide tracks consisting of cables or wires suspended above the earth and cars which can be run on the tracks and to provide systems of rapid transit over which freight or passengers can be transported with great speed and which will be economical in construction and operation.

Another object is to equip such cars with planes and rudders and propellers so that trolley cars can be operated with these elements in combination with the means for driving the cars.

Another object is to provide certain safety devices which will make transportation as safe on the trolley cars as on cars which run on the surface of the earth.

Other objects and advantages will be fully explained in the following description and the invention will be more particularly pointed out in the claims.

Reference is had to the accompanying drawings which form a part of this application.

Figure 1 is a side elevation of a car suspended on a wire or cable, constructed in accordance with my invention. Fig. 2 is a vertical section of a car and showing the manner of suspending the track and the manner of passing a hanger for the track. Fig. 3 is a detail view of one of the safety appliances. Fig. 4 is an end view of a car suspended on a double track or on cables which form a track for a car and showing also the manner of passing the hangers.

Similar characters of reference are used to indicate the same parts throughout the several views.

A car 1 of simple construction is provided with hangers 2 which are bent over at the upper ends and engage a brace beam 3. Trolley wheels 4 are journaled in the hangers and run on the cable or wire 5. The

cables 5 are supported by hangers 6 which may be attached to posts 7 and provided with braces 8. The hangers 2 are attached to the car and supplemental hangers 10 may be attached to the hangers 2 and to the side of the car. A guard roller 9 is provided for preventing the driving roller 4 from leaving the track. This roller 9 is journaled in adjustable bearings formed in the yoke 11. The yoke 11 has a shank 12 projecting downwardly through the hanger 2 and a guide bearing 13. The yoke is adjustable vertically by means of worm gearing formed on the shank 12 and on a shaft 14 which is provided with a hand wheel 15. The drive wheel 4 is driven by a bevel gear wheel 16. The gear wheel 16 is driven by a bevel gear wheel 17 which is driven by shaft 18 and shaft 18 is driven by the bevel gear wheel 19 which is driven by a bevel gear wheel 20 and the gear wheel 20 is driven by the motor 21. The shaft 18 is journaled in bearings 22, the hanger 10, and the ink or socket 23. The car is provided with a propeller 24 which is driven by a shaft 25 which is provided with a worm gear wheel 26 and the gear wheel 26 is driven by a worm gear wheel 27. The shaft 18 thus drives both the propeller and the gear wheels 4. The brace beam 3 is provided to prevent too great sagging of the wire or cable 5. Idlers 28 are journaled in the ends of the bar 3 to increase the length of the bearing or the extent of the bearing on the cable 5. Safety guards 29 are attached to the beam 3 so that in case the car 1 leaves the track, the guards 29 will engage the track 5 and prevent the car from falling. The car is further provided with a rudder 30 and planes 31. The planes are hingedly connected to the car 1 by means of a shaft 32 and a crank 33 is provided for raising the planes to different angles. The crank 33 may be held at different adjustments by racks 34.

The variation shown in Fig. 4 consists principally in duplicating the principal parts of the operating mechanism. Two tracks are provided and duplicate drive wheels 4 are provided. Two posts 7 are provided and a cross beam 35 with braces 36 serves to support the tracks by means of a hanger 37. The guard wheels 9 are journaled in bearing brackets 38. A common

shaft 39 may be used for the wheels 9. The brackets 38 are adjustable by means of the worm gearing heretofore described.

The cable 5 may sag to some extent between the hangers 16 and this would cause the cable to be higher about the hanger than at points some distance from the hanger. For this reason it is desirable that the bar 3 be made jointed at 41. A brake joint is provided so that the bar will brake downwardly at the ends whenever a portion of the cable 5 is higher between the wheels 4 than under the wheels 4. The bar will not brake upwardly. A pivot bolt 42 connects the two parts of the bar and a spring 43 is wound on the pivot bolt 42 and extended in both directions from the pivot bolt and bear on both parts of the bar 5 to make the wheels 28 follow the cable.

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

1. The combination with a car and a track therefor, hangers and wheels journaled in said hangers for engaging said track, said hangers being rigidly attached to said car, a motor on said car, gearing operatively connected with said motor and with said wheels for driving the wheels, guard wheels below said track, yokes carrying said guard wheels mounted on said hangers and having depending shanks and worm-gearing engaging said shanks for vertically adjusting said yoke.

2. The combination with a car and a track therefor, hangers rigidly connected with said car and wheels journaled in said hangers for engaging said track, a bearing beam above said track attached to said hangers, guards attached to said bearing beam, a motor on said car, and gearing operatively connected with said motor and with said wheels for driving the car.

3. The combination with a car and a track therefor, hangers rigidly connected with said car on one side, supplemental hangers attached to the other side of said car and to said hangers, wheels journaled in said hangers for engaging said track, a motor on said car, gearing operatively connected with said motor, idle guard wheels coöperating with said first named wheels for preventing said wheels from leaving said track, and yokes carried by said supplemental hangers for vertical adjustment of said guard wheels.

4. The combination with a car and a track therefor, hangers rigidly connected with said car and wheels provided with shafts journaled in said hangers for engaging said track to propel said car, a motor on said car, a driving shaft journaled in one of said hangers and in said car, gearing operatively connected with said wheels and with said

driving shaft to drive said wheels, a motor on said car, gearing operatively connecting said motor and said driving shaft, and a propeller provided with gearing operated by said driving shaft and coöperating with said wheels for driving the car.

5. The combination with a car and a track therefor, a bearing beam above said track provided with a bearing wheel in front and a bearing wheel in the rear of the car, hangers rigidly connected with said car and with said beam, and wheels journaled in said hanger for engaging said track to drive the car, planes hingedly connected with said car, and means for holding said planes at different angles, and a motor mounted on said car and provided with gearing for driving said wheels.

6. The combination with a car and a track therefor, hangers rigidly connected with said car and wheels journaled in said hangers for engaging said track to drive the car, a bearing beam connected with said hangers to prevent sagging of said track and guard members connected to said beam, planes hingedly connected to said car, a rudder connected to said car, a motor on said car, a shaft and gearing therefor operatively connected with said motor and with said wheels for driving the car, and a propeller actuated by said shaft and coöperating with said wheels for moving the car.

7. The combination with a car and a track therefor, hangers rigidly connected with said car and wheels journaled in said hangers for supporting and driving the car on said track, means for driving said wheels, antifriction guard wheels coöperating with said wheels and preventing said wheels from leaving the track, yokes carrying said guard wheels mounted on said hangers having depending shanks, and worm-gearing operatively connected with said shanks for adjusting said guard wheels relative to said first named wheels.

8. The combination of a car and a track therefor, hangers rigidly connected with said car and wheels journaled in said hangers for engaging said track, a jointed bearing beam for said hangers flexible vertically and provided with rollers bearing on said track in front and in rear of said hangers, a motor on said car, and gearing operatively connected with said motor and with said wheels for driving said car.

In testimony whereof, I set my hand in the presence of two witnesses, this 21st day of June, 1911.

JOHN B. BARNETT.

Witnesses:

A. L. JACKSON,
J. W. STITT.