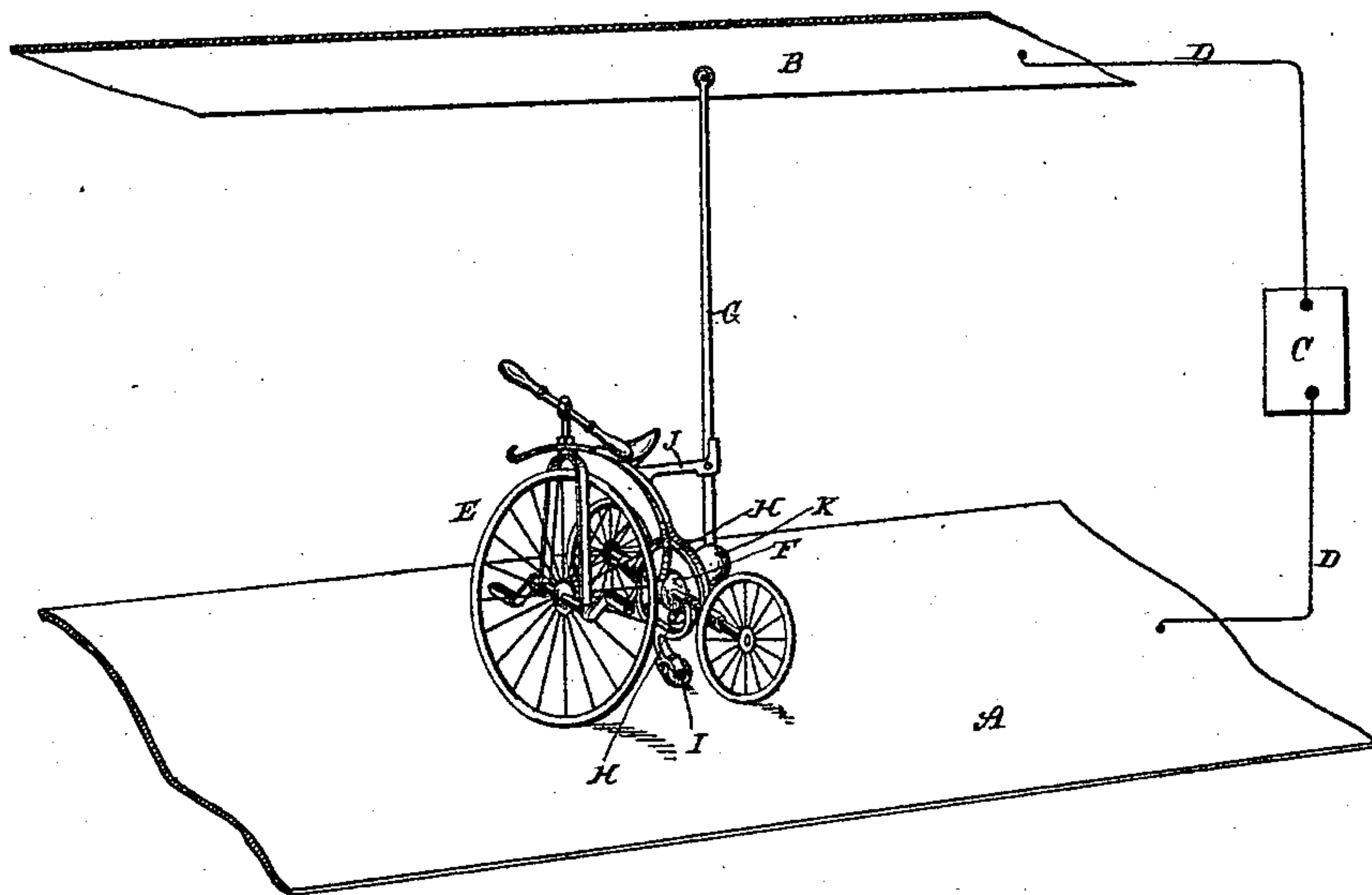


(No Model.)

J. ADAIR.  
ELECTRICALLY PROPELLED VEHICLE.

No. 421,887.

Patented Feb. 25, 1890.



Witnesses:

Rapraell Netter  
Ernest Hopkinson

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# UNITED STATES PATENT OFFICE.

JAMES ADAIR, OF NEW YORK, N. Y.

## ELECTRICALLY-PROPELLED VEHICLE.

SPECIFICATION forming part of Letters Patent No. 421,887, dated February 25, 1890.

Application filed September 20, 1889. Serial No. 324,562. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES ADAIR, a citizen of the United States, residing at New York, in the county and State of New York, have  
5 invented a certain new and useful Improvement in Electrically-Propelled Vehicles, of which the following is a specification, reference being had to the drawing accompanying and forming a part of the same.

10 The design or object of this invention is, primarily, to produce what for convenience I designate an "electrical rink"—that is to say, to provide an economical and practical plan for the automatic propulsion in any desired  
15 direction of bicycles or any other similar vehicles over a given area. For this purpose I propose to construct a platform or roadway or level surface of any desired dimension having a conducting-surface. Above such sur-  
20 face at a suitable height and coextensive with it I erect a second conducting-surface in the nature of a ceiling, and these two surfaces I connect to the terminals of an electrical generator. On the lower surface or flooring are  
25 one or more light-running vehicles carrying electro-magnetic motors geared with or in any well-known way adapted to drive one or more of the wheels thereof. The current for oper-  
30 ating these motors I obtain through conductors maintained in any desired manner in contact with the upper and lower conducting-surfaces. With such a structure it will be seen that a large number of vehicles may be run, and that the riders by making the nec-  
35 essary electrical connection may pass and re-pass each other in any direction and may perform whatever evolutions the dimensions of the track or rink will permit. Such a structure, while particularly adapted for uses  
40 as a place of simple amusement, may be utilized as a practical means of transporting passengers or goods from one place to another wherever the restriction of the number of conveyances is undesirable.

45 The invention is not limited in any sense to the mechanism or particular structure employed, the essential features being the two conducting-surfaces extended in all directions to a predetermined extent and the electro-  
50 magnetically propelled conveyances or vehicles provided with means for making a rolling or sliding contact with the said surfaces,

whereby they may be propelled, under the control of a rider, in any direction which the extent of the surfaces will permit. 55

In illustration of the principle of construction and operation of the invention I have appended a drawing.

The drawing referred to illustrates a portion of the two conducting-surfaces, showing 60 the electrical connection therewith and the conventional form of vehicle or conveyance adapted for use therein.

A represents a level surface, which may be constructed in any desired manner and so as 65 to be capable of conducting an electric current. For example, it may be built up of cement or concrete and covered with sheet iron or copper or the like. Above this surface and equidistant at all points therefrom 70 is a ceiling B, which is also provided with a conducting-surface of sheet metal or the like. These two surfaces are connected by any suitable conductors D with the poles of an electrical generator C. 75

The surface A is adapted to form a road- 75 bed for tricycles or other similar vehicles. One of these devices E is shown, and in order that it may be propelled, as above described, it should carry a motor geared with or ar- 80 ranged to drive one of the shafts or axles. This motor is represented by the commutator F, secured to one of the axles. In order to supply this motor with current from the two conducting-surfaces A and B, I may employ a 85 conducting-rod G, pivoted in any suitable manner to the vehicle and carrying a contact which bears upon the upper surface B. Through this device the current is led to the commutator by brushes H and is carried down 90 to the conductor A either through metal wheels or by a special contact-disk I, carried by the vehicle.

It is desirable that the arm G should be in yielding contact with the upper surface, and 95 for this reason I have shown it as pivoted to an arm J and provided with a weight K, which maintains it in contact with the upper surface, the long arm of the rod being slightly longer than the distance between its fulcrum 100 and the surface D, so that it trails over the said surface. Any other means or device for maintaining the electrical connections described may be employed.



The direction of movement of the vehicles may be controlled by the rider through any of the devices ordinarily employed for this purpose. The current may be interrupted  
5 by lowering the contact-arm G or by the use of any current-regulator placed upon the vehicle and in position to be readily manipulated by the rider.

What I claim is—

10 The combination, with a conducting-surface forming a bed over which one or more vehicles may be run in any desired direction, and a conducting-surface above the same parallel

to and coextensive with the bed, of one or more electro-magnetically propelled vehicles, 15 devices for connecting the terminals of the motors on said vehicles with the two conducting-surfaces, and a generator of electricity having its poles connected to the two surfaces, respectively, as set forth. 20

In testimony whereof I have hereunto set my hand this 19th day of September, 1889.

JAMES ADAIR.

Witnesses:

GEO. H. WEYER,

JOHN W. STEVENS.