

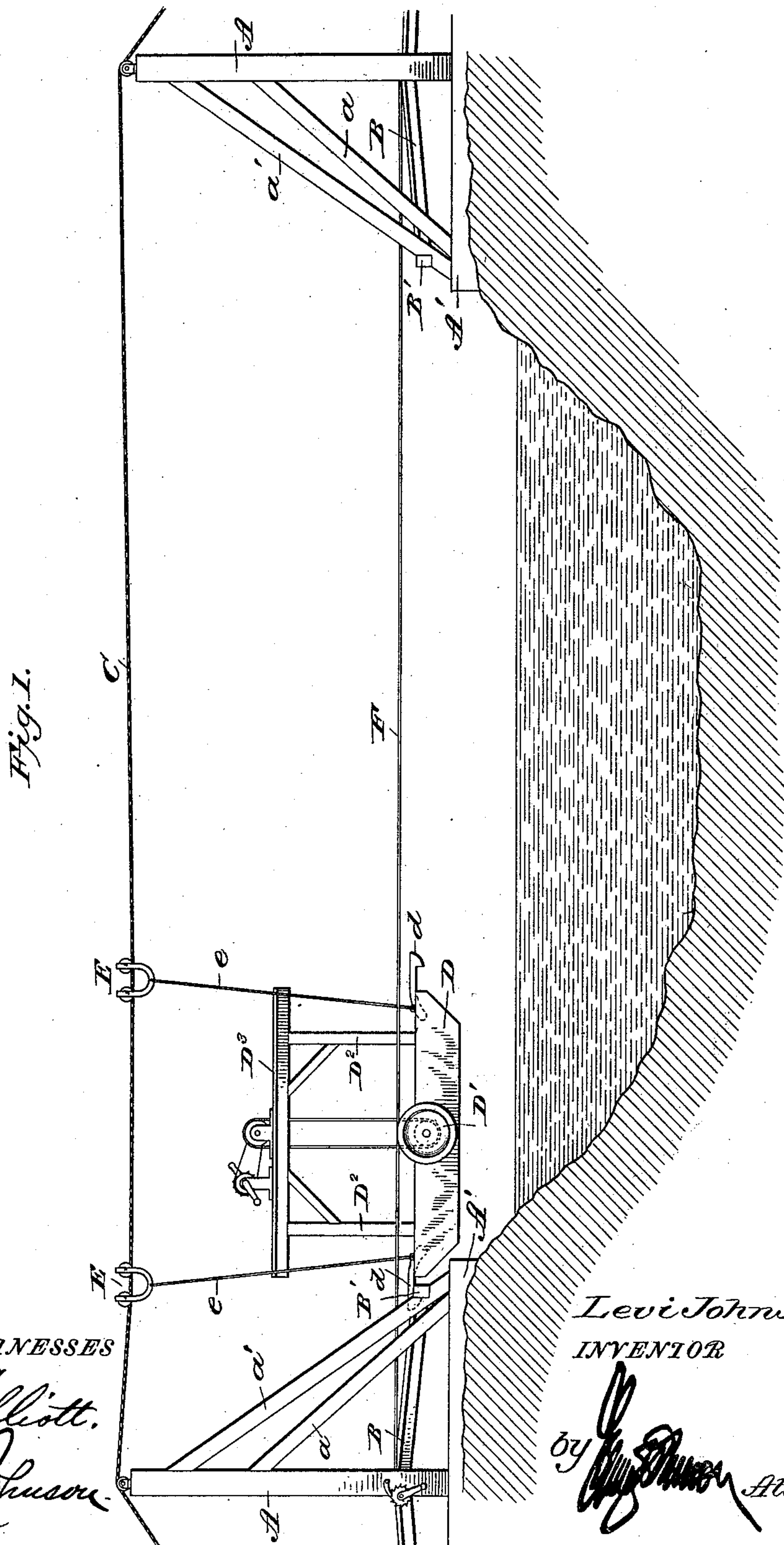
(No Model.)

2. Sheets—Sheet 1.

L. JOHNSON.  
AERIAL TRAMWAY.

No. 523,895.


Patented July 31, 1894.



*WITNESSES*

WITNESSES  
G. S. Elliott.  
W. Johnson.

*Levi Johnson*  
INVENTOR

by  Attorney

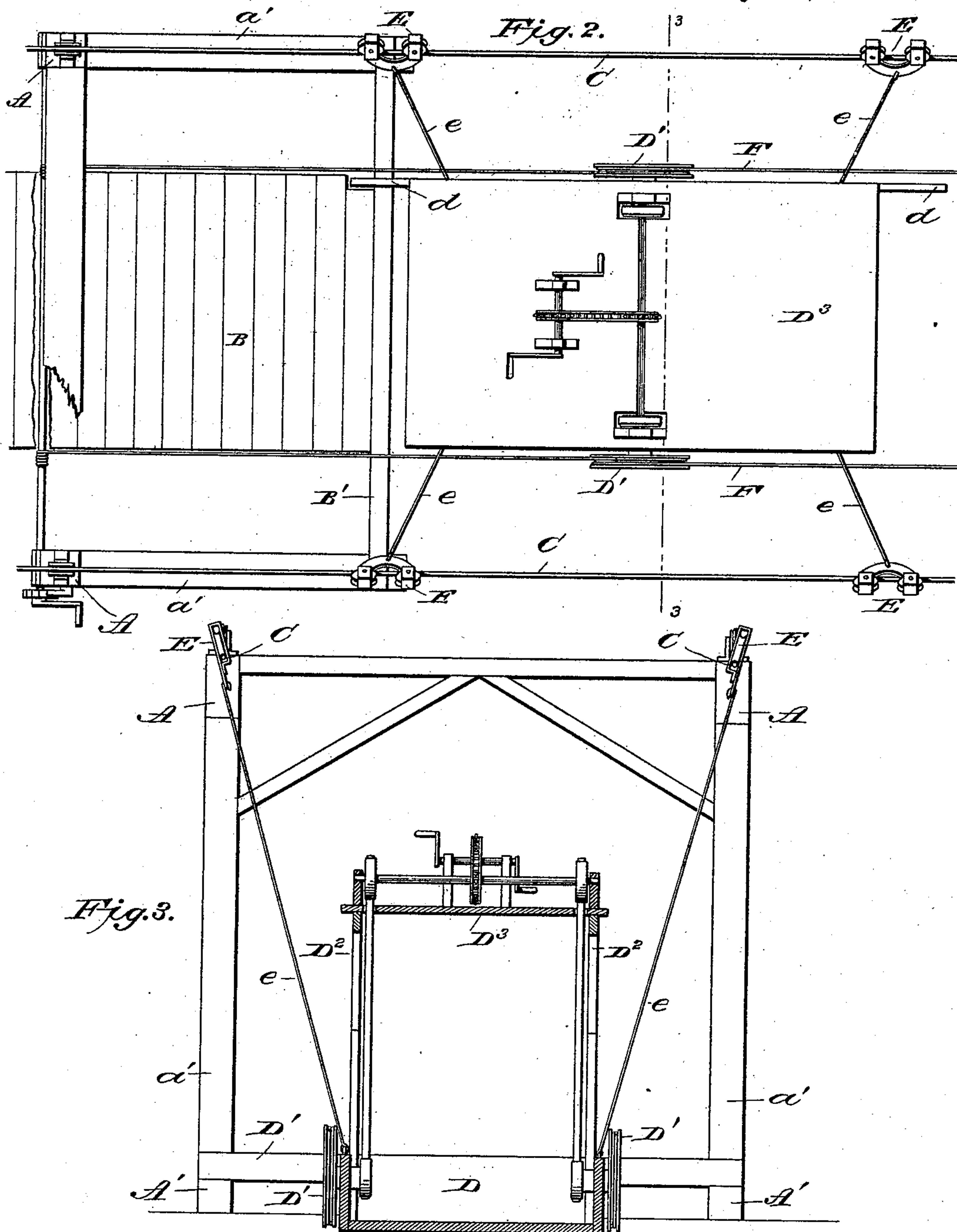
(No Model.)

2 Sheets—Sheet 2.

L. JOHNSON.  
AERIAL TRAMWAY.

No. 523,895.

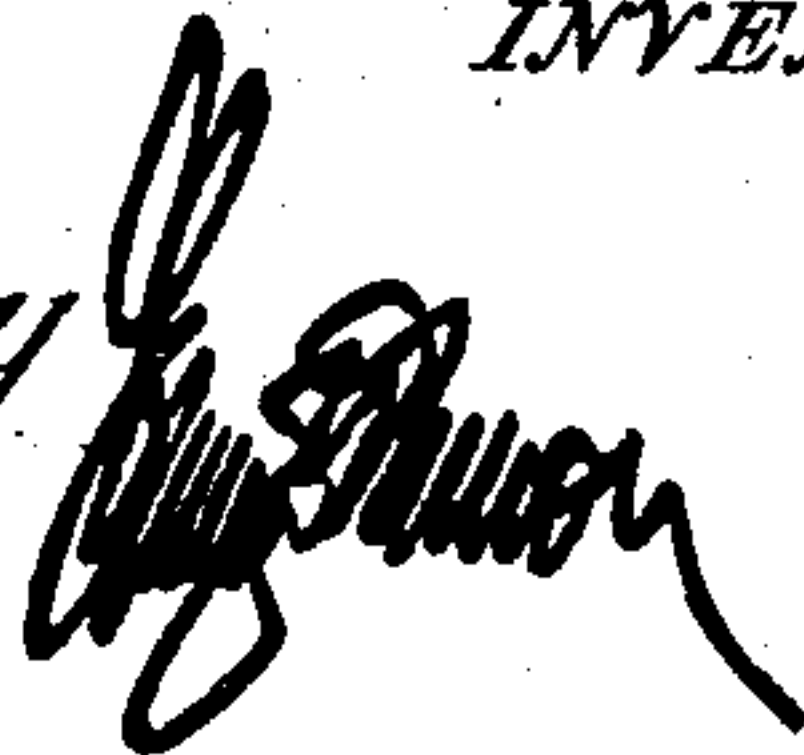
Patented July 31, 1894.



WITNESSES

G. S. Elliott.  
L. M. Johnson.

Levi Johnson  
INVENTOR

by  Attorney



# UNITED STATES PATENT OFFICE.

LEVI JOHNSON, OF NEMAHA CITY, NEBRASKA.

## AERIAL TRAMWAY.

SPECIFICATION forming part of Letters Patent No. 523,895, dated July 31, 1894.

Application filed April 13, 1894. Serial No. 507,499. (No model.)

*To all whom it may concern:*

Be it known that I, LEVI JOHNSON, a citizen of the United States of America, residing at Nemaha City, in the county of Nemaha and State of Nebraska, have invented certain new and useful Improvements in Aerial Tramways; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

This invention relates to improvements in aerial tramways, and it has for its object to provide means for suspending a car from cables and to provide cables which engage with driven wheels carried by the car, said wheels being adapted to be rotated so as to draw the car from one end of the tramway to the other.

In the accompanying drawings, Figure 1 is a side elevation. Fig. 2 is a plan view, and Fig. 3 is a sectional view taken on the line 3-3 of Fig. 2.

A A designates upright posts which are located at each end of the tramway and support the cables; these posts being braced by pieces *a* and *a'* which extend from the sill pieces A' to the posts as shown.

B designates the platforms which are built between the posts or uprights preferably at a slight inclination, and it is not necessary that these platforms should be wider than the width of the conveyance or car. One end of each platform terminates in a cross-piece B' with which hooks pivoted to the car engage when the car abuts against the platform.

The posts A are provided at their upper ends with suitable pulleys over which pass the supporting cables C, the ends of the cables being anchored and provided with means for tightening the same. On each side of the stream or ravine which it is desired to cross similar permanent structures, hereinbefore described are provided.

D designates the car or conveyance to the side pieces of which are pivoted hooks *d* which are adapted to engage with the cross-

piece B' of the platform so as to hold the car in engagement therewith while being loaded or unloaded. To the side pieces of the car are attached rods *e e* which carry at their upper ends pulleys E adapted to travel over the supporting cables C C and suspend the car therefrom.

F F designate flexible connections which extend from the posts A engaging with drums supported thereby, the shafts of the drums having crank-handles and ratchet-wheels for preventing backward rotation.

The cables C C which extend from the posts A are a considerable distance apart so that the rods or supports *e* which extend therefrom will converge toward the car, and the cables or flexible connections F are not so far apart and pass around grooved pulleys D' journaled in the side pieces of the car. The shafts which support the pulleys D' carry driven pulleys over which pass belts extending from pulleys mounted on the superstructure of the car; said superstructure consisting of uprights D<sup>2</sup> upon which is supported a cover or top D<sup>3</sup>. The pulleys referred to are mounted on a shaft journaled in bearings attached to the cover or top and are preferably driven by an operator sitting on the top of the car.

In operation the car is suspended from the cables C C and the weight of the same tends to draw the cables toward each other. The cables F which are permanently fastened at their ends to the posts A and drum hereinbefore referred to are passed around the pulleys D' carried by the car and when these pulleys are turned in either direction by the mechanism described the car will be moved to one of the platforms and the hooks *d* carried thereby caused to engage the cross-piece B'; when the car is loaded for another trip the hooks are released and the pulleys D' properly turned to cause the car to travel across the stream or ravine to the other side.

This device is intended to take the place of expensive bridges, and is used at such points where the travel would not justify the building of bridges.

I am aware that prior to my invention it has been proposed to provide aerial tramways



comprising overhead ways from which a car is suspended and an operating rope for the car extending from one end of the tramway to the other, and I therefore do not claim such invention broadly; but

What I do claim as new, and desire to secure by Letters Patent, is—

1. In an aerial tramway, the combination, of the supporting posts A A having cables which extend parallel with each other from post to post, operating cables or flexible connections also extending from the supporting posts and secured thereto so as to be of less distance apart than the supporting cables, together with a car having supporting rods which extend from pulleys mounted on the supporting cables and converging therefrom to the car to which they are connected, and pulleys carried by the car around which the operating cables or flexible connections pass,

substantially as shown and for the purpose set forth.

2. In combination with the supporting posts having cables C C and drums over which pass cables F F, of a car D having supporting rods *ee* connected to pulleys E E which travel upon the cables C C, pulleys D' carried by the side pieces of the car, said pulleys being adapted to be rotated in unison, the cables F being passed around said pulleys, together with hooks *dd* pivoted to the car and cross-pieces B' secured to the supporting posts, substantially as shown and for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

LEVI JOHNSON.

Witnesses:

E. A. BOURNE,  
ELMORE TANN.