(No Model.) 2 Sheets—Sheet 1.

W. P. WALLING.

ELEVATED CABLE ROAD.

No. 426,885. Patented Apr. 29, 1890.

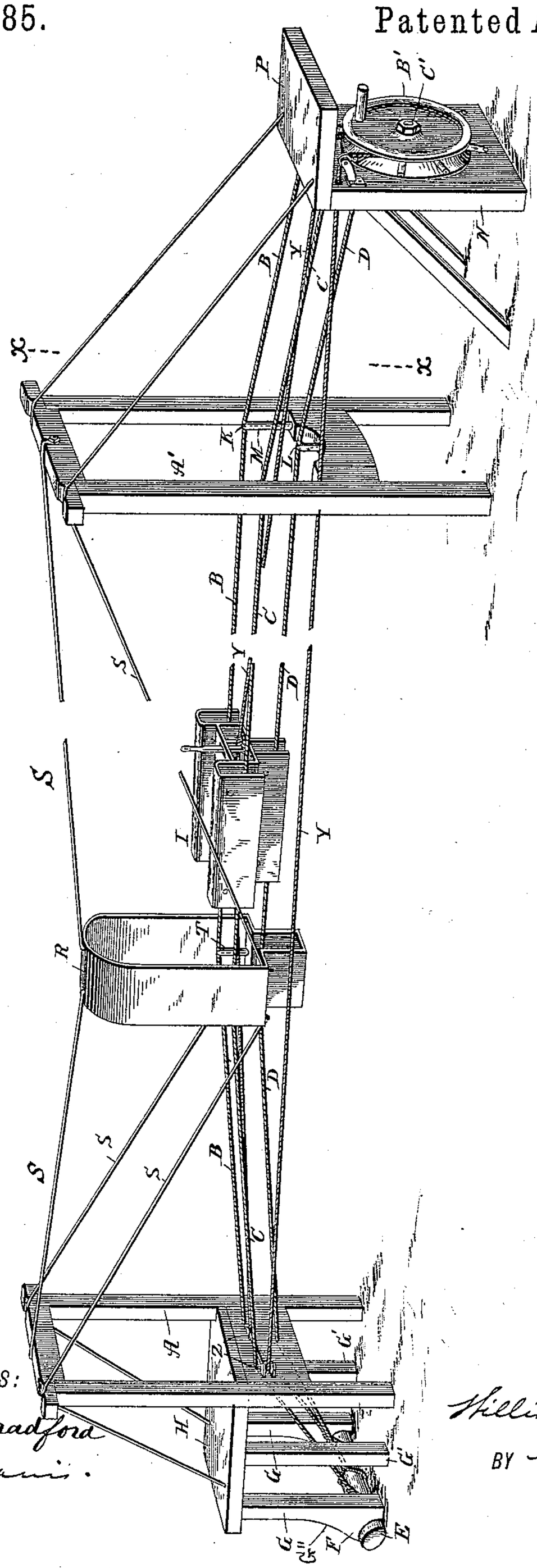

Fig. 1.

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(No Model.)

2 Sheets—Sheet 2.

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Fig. 2.

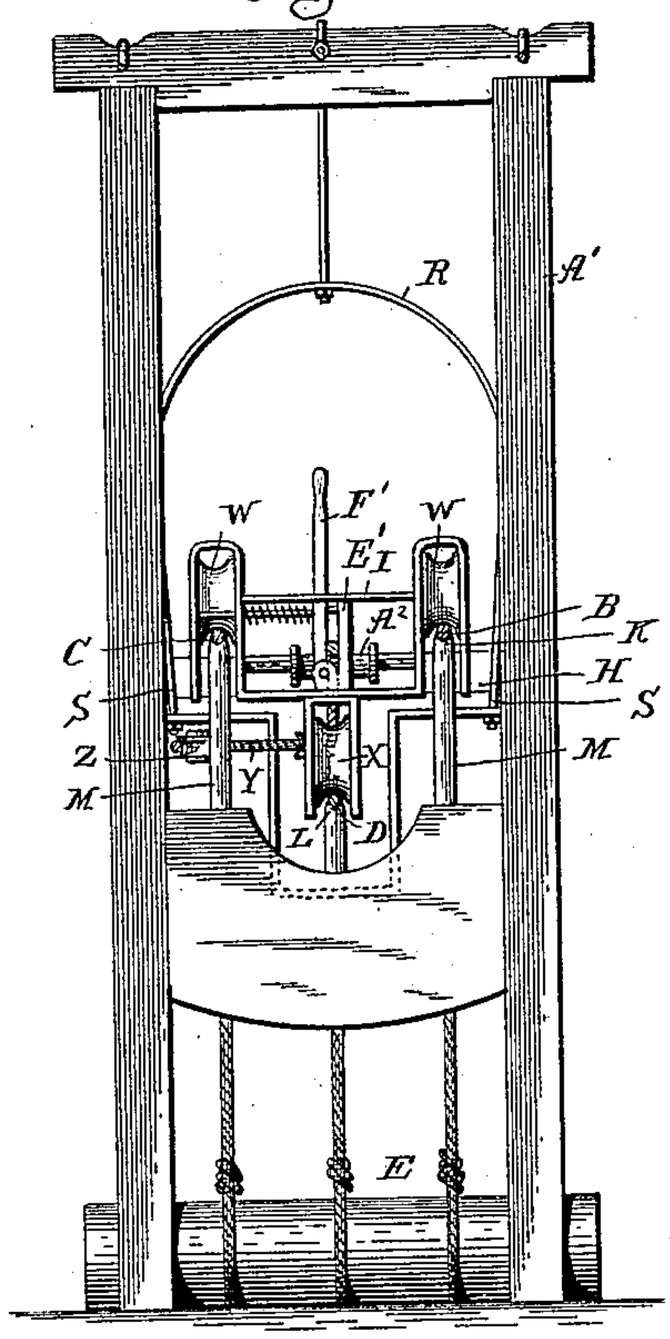


Fig. 3.

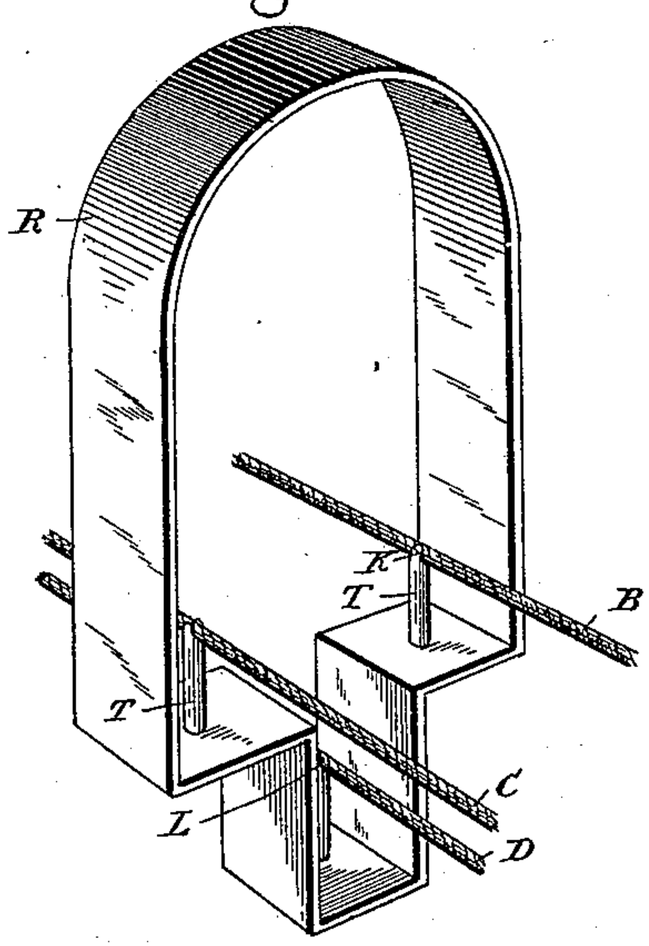
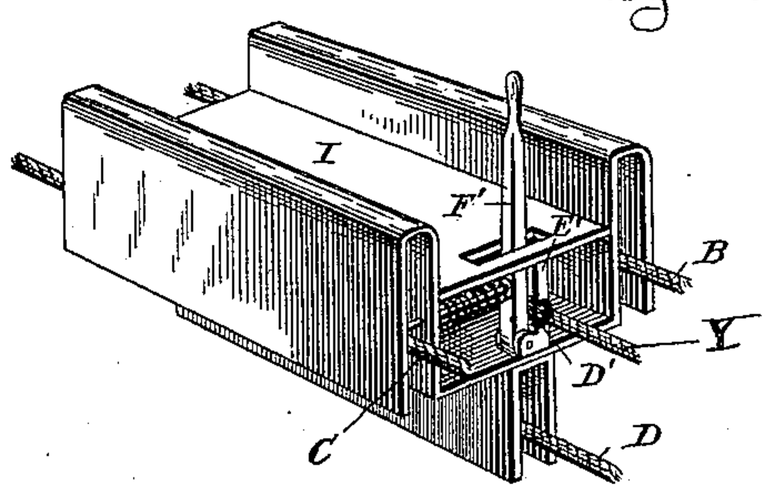


Fig. 4.



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UNITED STATES PATENT OFFICE.

WILLIAM P. WALLING, OF SANTA MONICA, CALIFORNIA.

ELEVATED CABLE ROAD.

SPECIFICATION forming part of Letters Patent No. 426,885, dated April 29, 1890.

Application filed December 3, 1889. Serial No. 332,465. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM P. WALLING, a citizen of the United States, residing at Santa Monica, in the county of Los Angeles and State of California, have invented certain new and useful Improvements in Elevated Cable Roads or Carriers, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to certain improvements in the construction of that class of elevated cable-lines in which a carriage or car is drawn over stationary cable-tracks by means of a traveling cable; and it has for its objects to provide for securely fastening or anchoring the track-cables at one end thereof, so as to hold said cables taut for the passage of the carriage or car over the same, to provide for supporting the track-cables at points intermediate between their main supports, and to provide an improved carriage or car for traveling over the track-cables, as will more fully hereinafter appear.

The above-mentioned objects I obtain by the means illustrated in the accompanying drawings, in which—

Figure 1 represents a perspective view showing my improved cable-line complete, with the carriage or car in position thereon. Fig. 2 represents a transverse section on the line *x x* of Fig. 1; Fig. 3, a perspective view of a suspended frame or support; Fig. 4, a perspective view of the car and the respective cables.

Referring to the drawings, the letters A A′ indicate two towers or elevated structures forming the main supports of the track-cables, which are indicated, respectively, by the letters B, C, and D. These cables at one end are fastened to a beam E, which extends transversely across the line of the cables. The said beam may consist of wood or other material, and is held down to its seat upon the surface of the earth or the bed of a stream by means of the shoulders or brackets F, formed on or secured to the vertical piles G, which are driven into the ground or into the bed of the stream and form a portion of the supports of a platform H, which constitutes one of the stations, to or from which the car I travels. The upper cables B C are located in planes parallel with each other, and the lower cable D is located below said cables B and C and intermediate between the said cables B and C. The track-cables are supported in bearings K and L in the respective towers or structures, the bearings of the tower A′ being formed at the upper ends of the vertical standards M, secured to said tower, so that the car may pass over the said cables freely and without obstruction.

The letter N indicates a wall or structure, to which the ends of the cables B C D, opposite the ends to which they are anchored, are fastened. This wall or structure is provided with a platform P on top, which forms one of the terminal stations of the line.

The letter R indicates an intermediate frame for the support of the track-cables, which is suspended between the towers between guy cables or chains S, secured to said towers. The said frame is provided with vertical standards T, similar to those of the tower A′, in which the track-cables are held, so as to permit the carriage to pass freely through the frame.

The letter I indicates the carriage, which is provided with pulleys W at each side, which travel upon the upper track-cables B C, and intermediate pulleys X, which travel upon the cable D below.

Y indicates the traveling cable, which passes around pulleys Z, having their journal-bearings in suitable supports secured to the tower A. This cable extends centrally through the carriage, passing over a drum A^2, journaled therein, the ends of said cable being passed through suitable openings in the wall or structure N and passed around the periphery of the winding-drum B′, which is mounted upon a journal-pin C′, fastened to said wall or structure, and which may be turned by a suitable engine or other motor, so as to wind the traveling cable back or forth thereon and give motion to the carriage or car. That portion of the traveling cable which passes through the car is provided with a knot or enlargement D′, which is engaged or disengaged by the grip mechanism of the car to carry it back or forth or allow it to remain idle, as may be desired. The grip mechanism consists of a stationary standard E′, affixed to the car below the upper floor thereof and having fulcrumed to it a lever F′, extending

upward through a slot in the floor, so as to be under the control of the operator. The said lever is pressed normally toward the upper part of the standard, so as to normally grip the traveling cable, but permit the operator to release it instantly when desired.

The brackets, which hold the cross-beam to which the cables are fastened, are sloped upwardly, as indicated by the letter G″, so that said beam may be allowed to drop and be drawn under the edges of said brackets, and thus be brought into place, the piles being subsequently driven down so as to engage the beam.

The towers A and A′ may also be constructed of piles and driven into the ground in the same manner as the piles G, and intermediate piles G′ may be employed to assist in supporting the platform H, if necessary.

As constructed, it will be apparent that the track-cables will form a trough-like track for the car, which will effectually prevent it from displacement during rapid transit. By the arrangement of the cross-beam and the brackets on the piles which hold it down it will be perceived that the said beam may be readily guided to its seat and anchored there, and the intermediate support provides for carrying the track-cables over rivers and chasms where other supports would be impracticable.

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

1. The combination, in an elevated cable road or line, of a cross-beam and the brackets or shoulders formed on or secured to the vertical piles, whereby the cross-beam is confined to its seat to form an anchorage for the ends of the cables, substantially as specified.

2. The combination, with the vertical piles and the cross-beam forming an anchorage for the ends of the track-cables, of the brackets or shoulders sloped on their upper sides to form guides for directing the cross-beam to its seat, substantially as set forth.

3. The combination, with supports or towers, of the parallel upper cables and an intermediate tower-cable supported by said towers and fastened in any convenient manner at each end, the said cables forming a trough-like track for the carriage, whereby it is prevented from displacement during rapid transit, substantially as specified.

4. The combination, with a pair of towers or supports A A′, and the track-cables connecting these towers, of the intermediate frame R, suspended between the said towers and provided with the supports T for the said track-cables, and the guy-cables S, connecting this frame to the towers A A′ and serving to suspend it, this frame forming a support for the track-cables intermediate the said towers, substantially as described.

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

WILLIAM P. WALLING.

Witnesses:
M. B. BOYCE,
S. D. NORTHCUTT.