

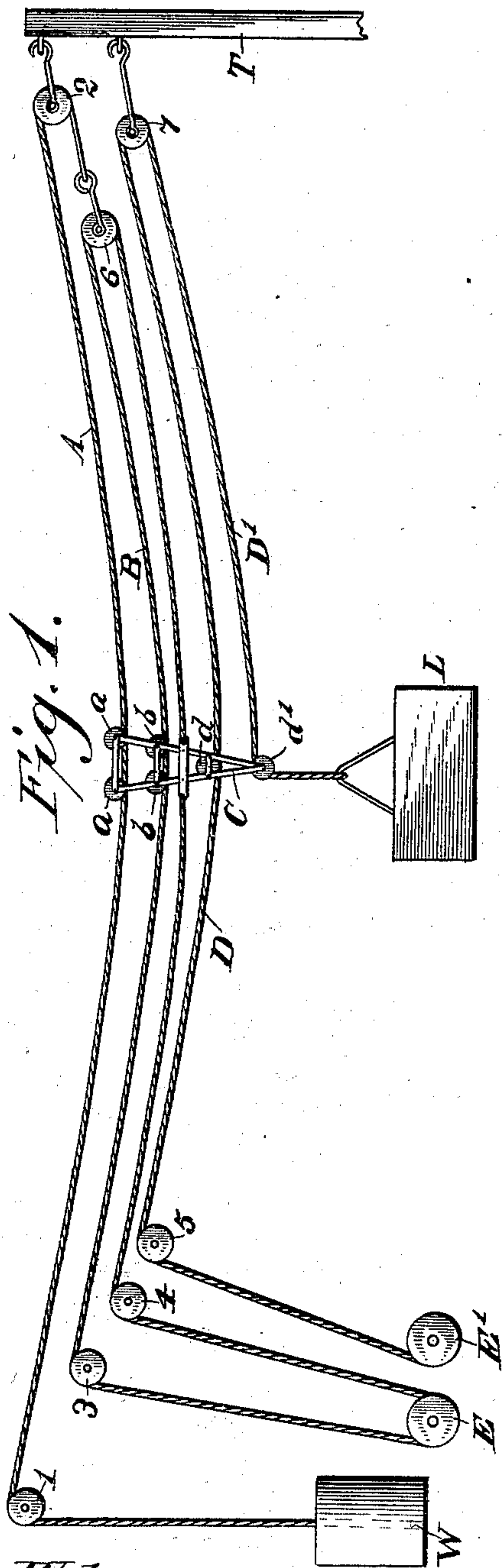
No. 748,295.

PATENTED DEC. 29, 1903.

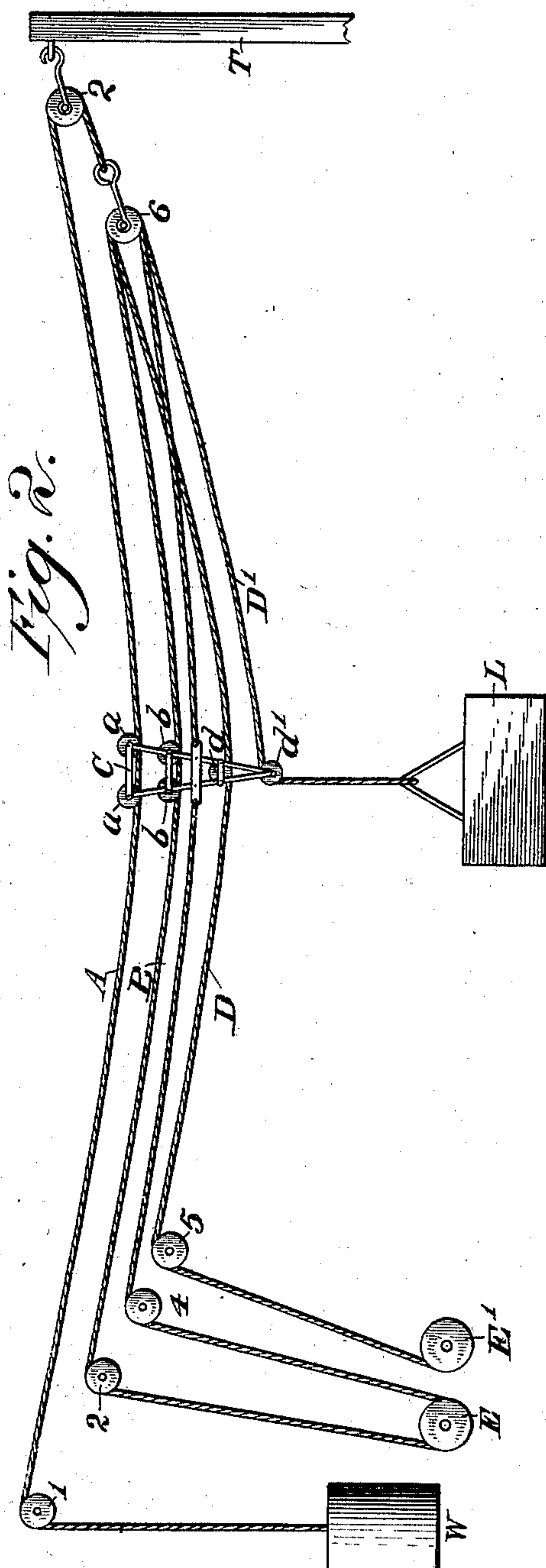
T. S. MILLER.
CABLEWAY.

APPLICATION FILED JULY 30, 1901. RENEWED MAY 16, 1903.

NO MODEL.



Witnesses:
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UNITED STATES PATENT OFFICE.

THOMAS SPENCER MILLER, OF SOUTH ORANGE, NEW JERSEY.

CABLEWAY.

SPECIFICATION forming part of Letters Patent No. 748,295, dated December 29, 1903.

Application filed July 30, 1901. Renewed May 16, 1903. Serial No. 157,370. (No model.)

To all whom it may concern:

Be it known that I, THOMAS SPENCER MILLER, a citizen of the United States, and a resident of South Orange, in the county of Essex and State of New Jersey, have invented a new and Improved Cableway, of which the following is a full, clear, and exact description.

This invention consists in improvements on the cableways shown in my Patent No. 637,143, dated November 14, 1899, and my patent application, Serial No. 683,843, filed June 18, 1898.

Figures 1 and 2 are elevations showing diagrammatically two slightly-modified forms of my invention.

In each of these forms the main or trackway rope A passes over pulleys 1 and 2, located, respectively, on the head and tail supports. At the head-supports the end of this rope has a tension or counterweight W secured thereto, so that the rope is under a strain corresponding with the weight of the counterweight W. At its other end the rope A after passing about the pulley 2 is secured to a pulley 6, about which passes the hauling-rope B. The hauling-rope is endless, the ends being secured to the carriage C and extending in opposite directions. One end after passing about the pulley 6 extends back through the carriage and beneath the wheels *b b* and then about the pulley 3 at the head-support and down to the drum E. From the drum the rope extends over pulley 4 at the head-support and is then connected with the carriage. The hoisting-rope extends from the drum E' over pulley 5 on the head-support and then through the carriage beneath pulley *d* thereon to and about a pulley 7, supported from the tail-support, and thence back to the carriage over pulley *d* thereon and down to the load L. In Fig. 1 the pulley 7 is shown as directly supported from the tail-support T, having thus a fixed support, while in Fig. 2 the pulley 7 is mounted in the same frame with the pulley 6, over which the hauling-rope runs, and so has a movable or yielding support. The portion D of the hoisting-rope which extends from one support to the other may be called the "full run" in contradistinction to the portion D', which extends only from one support to the carriage. The full run D, passing beneath the pulley *d*

on the carriage, exerts a lifting effect upon the carriage whenever the rope is placed under strain and the lifting effect upon the carriage is proportioned to the strain upon the rope D, although of course only a small percentage thereof. All of the ropes are thus utilized to support the carriage, and the size of the main or trackway cable and its cost may be reduced. The employment of a counterweight or yielding anchorage for sustaining one end of the ropes also prevents the possibility of overstraining them, as they can never be strained beyond the amount due to the counterweight.

The present application being of later date than the original application of which my application Serial No. 85,056 is a division, I make no claim herein to the subject-matter claimed in said application Serial No. 85,056.

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

1. A hoisting and conveying apparatus comprising a trackway, a carriage thereon, means for moving the carriage along the trackway and a hoisting-rope operative independently of the traction-rope and adapted when under strain to assist in supporting the carriage.

2. A hoisting and conveying apparatus comprising a trackway, a carriage thereon, means for moving the carriage along the trackway, and an independent hoisting-rope extending across the span and back to the carriage, one run of said hoisting-rope engaging the carriage to assist in its support.

3. In a cableway, the combination of a supporting-rope, a hauling-rope and a hoisting-rope which extends across the span and back to the carriage, and a carriage traveling upon and supported by all of said ropes.

4. In a cableway, the combination of a trackway-rope, a carriage, a hauling-rope and a hoisting-rope, and a carriage traveling upon and supported by each of said ropes.

5. In a cableway, the combination with a trackway-rope, a hauling-rope and a hoisting-rope extending across the span and back to the carriage, of a carriage supported by all of said ropes, and a common tension device acting upon the trackway-rope and the hauling-rope to produce initial strains therein.

6. In a cableway, the combination with a trackway-rope adapted to move upon its supports, a carriage thereon, an endless hauling-rope, a tension device connected with the said two ropes to proportionally strain them, and a hoisting-rope extending across the span and back again and engaging the carriage to assist in its support.

7. In a cableway, the combination with a trackway-rope adapted to move upon its supports, a carriage thereon, an endless hauling-rope, a tension device connected with the said two ropes to proportionally strain them, and a hoisting-rope extending across the span and back again and engaging the carriage to assist in its support, both runs of the hauling-rope also engaging the carriage to assist in its support.

8. In a ropeway, in combination a traction-rope containing two runs across the span, a movable sheave in the tail-end loop of said traction-rope, a supporting-rope extending across the span and having one end connected with said movable sheave, a tension device connected with the other end thereof, and a load-carriage supported by said supporting and traction ropes collectively.

9. In a ropeway, in combination, a traction-rope containing two runs across the span, a movable sheave in the tail-end loop of said traction-rope, a load-carriage moved by said traction-rope and a supporting-rope extending across the span and having one end connected with said movable sheave and a tension device connected with the other end thereof.

10. In a ropeway in combination a load-carriage, traction and supporting ropes therefor and a tension device; the supporting-rope connecting said tension device with said traction-rope, whereby the tension is transmitted through said supporting-rope to said traction-rope.

11. In a ropeway, in combination, a load-carriage, supporting and hoisting ropes, and a tension device; the supporting-rope connecting said tension device with said hoisting-rope whereby the tension is transmitted through said supporting-rope to said hoisting-rope.

12. In a ropeway, in combination, a load-carriage, traction and supporting ropes therefor, a hoisting-rope containing an outward and an inward run and a tension device; the supporting-rope connecting said tension device with the tail-end loop of said hoisting-rope whereby the tension is transmitted through said supporting-rope to said hoisting-rope.

13. In a ropeway, in combination, a load-carriage containing four tiers of sheaves and means of attachment between the two upper and two lower tiers, a supporting-rope upon which the upper tier rests, a traction-rope upon one run of which the next to the upper tier rests, and the lower run of which is secured to said means of attachment, a hoisting-rope on one run of which the next to the lower tier rests and the other run of which rests on said lower tier.

14. In a ropeway, in combination a load-carriage, traction and hoisting ropes each containing an outward and an inward run and unitary means controlling the tension on both of said ropes.

15. In a ropeway, in combination a load-carriage, traction and hoisting ropes each containing an outward and an inward run and means whereby tension is exerted on said ropes at the looped ends thereof.

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Witnesses:

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