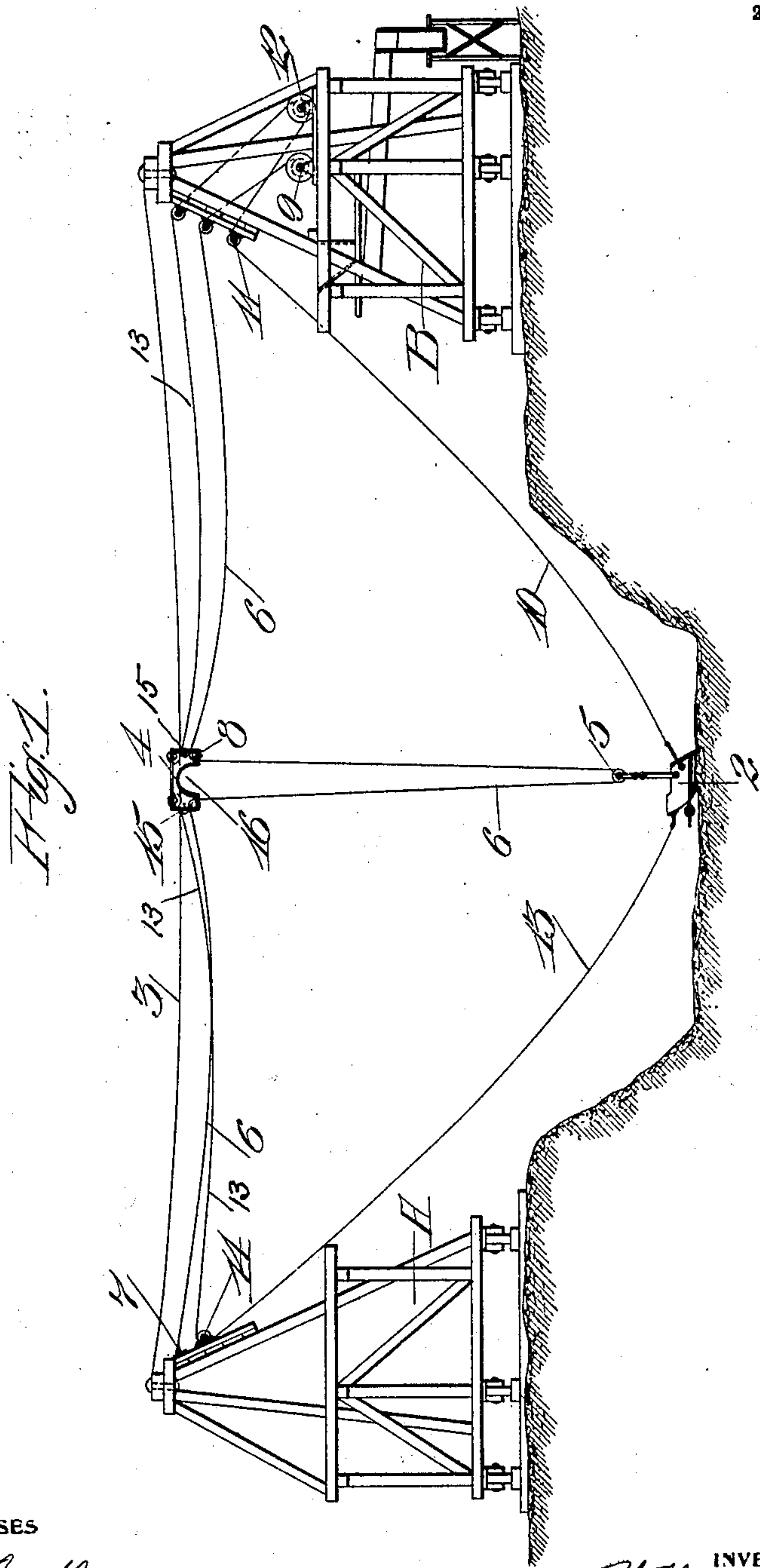


W. S. LA SHELLS.
AERIAL TRAMWAY.
APPLICATION FILED MAY 8, 1908.

916,335.

Patented Mar. 23, 1909.

2 SHEETS—SHEET 1.



WITNESSES

Shastberg
baBmfield

INVENTOR

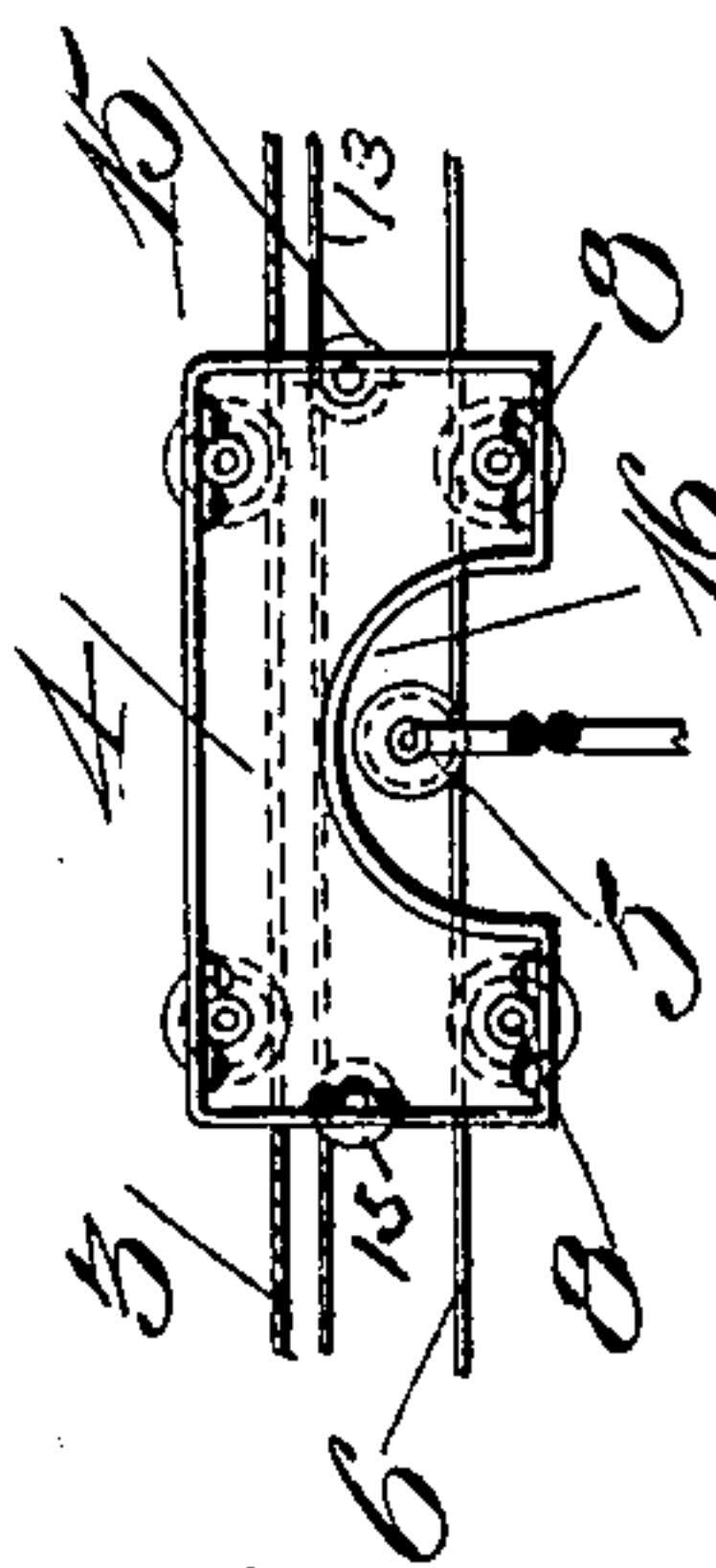
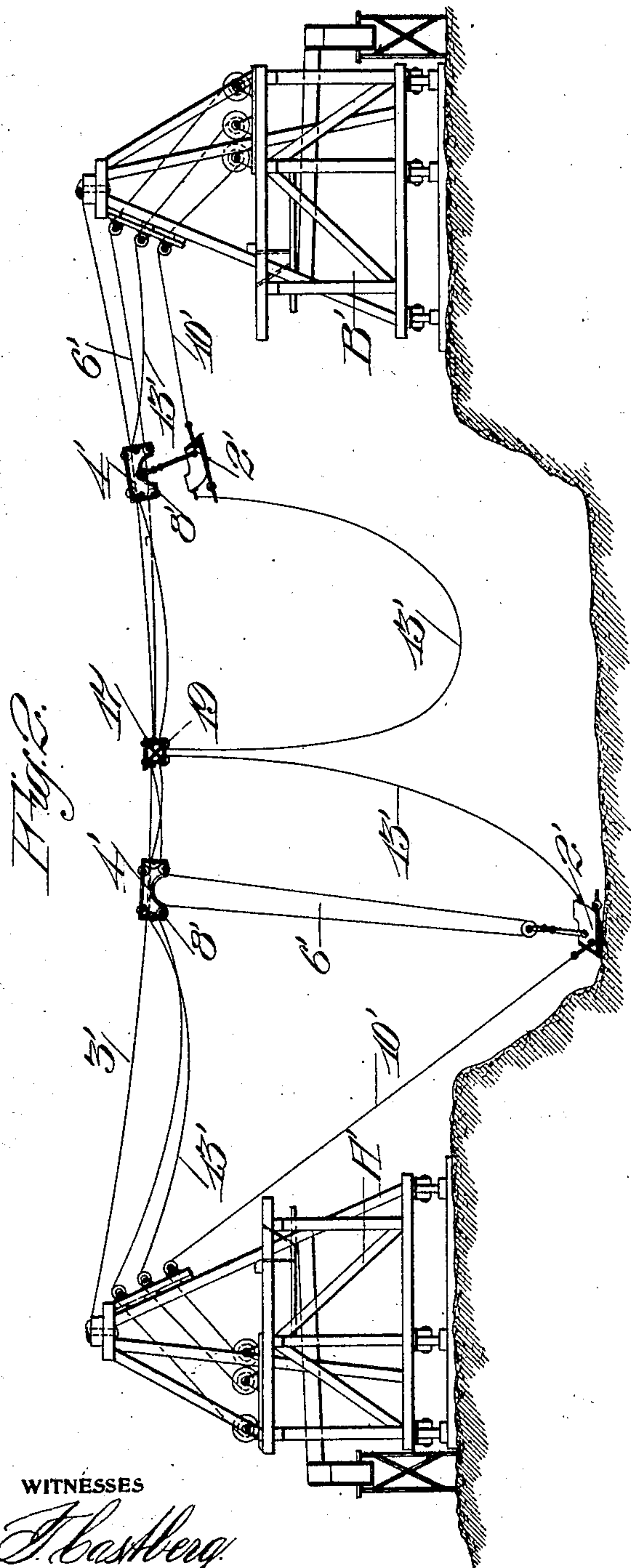
William S. La Shells
BY *Geo. H. Strong*
ATTORNEY

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WITNESSES

J. H. Berg
Chas. R. Field

INVENTOR

William S. LaShells
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UNITED STATES PATENT OFFICE.

WILLIAM S. LA SHELLS, OF BERKELEY, CALIFORNIA, ASSIGNOR TO KLAMATH RIVER GOLD MINING CO., OF BENICIA, CALIFORNIA, A CORPORATION OF CALIFORNIA.

AERIAL TRAMWAY.

No. 916,335.

Specification of Letters Patent.

Patented March 23, 1909.

Application filed May 8, 1908. Serial No. 431,624.

To all whom it may concern:

Be it known that I, WILLIAM S. LA SHELLS, citizen of the United States, residing at Berkeley, in the county of Alameda and State of California, have invented new and useful Improvements in Aerial Tramways, of which the following is a specification.

My invention relates to aerial tramways or cableways. Its object is to provide a simple, practical overhead cableway system for transporting burdens of one sort or another; which system is particularly applicable in or as an excavating or dredging plant; which system will permit of two burden carriers simultaneously operating in opposite directions on the same supporting track cable, and in which system a fall line may also cooperate with or be substituted for the track cable in supporting the burden-carrier in the traverse of the latter; all as will be hereinafter more particularly explained.

The invention consists of the parts and the construction and combination of parts as hereinafter more fully described and claimed, having reference to the accompanying drawings, in which—

Figure 1 is a side elevation showing the arrangement of my aerial tramway. Fig. 2 is a similar view, showing my double hauling system. Fig. 3 is an enlarged view of the track carriage.

In Fig. 1, A and B represent two fixed towers or piers suitably spaced apart, and between which the burden-carrier 2 is designed to operate. 3 is a stationary track cable stretched between the towers A—B, and 4 is a carriage designed to traverse the track, and from which carriage the burden-carrier and its fall block 5 are suspended by the fall line 6. The fall line 6 is shown as permanently anchored at one end, at 7, on the tower A, and thence passes around the spaced direction pulleys 8 on the carriage 4 and around the sheave of the fall block 5, thence to a suitable drum of the hoist 9 located on or proximate to tower B. The burden-carrier 2 may be of any appropriate construction, and is here shown in the form of a scraper such as is used for scooping up gravel, earth and the like. 10 is an inhaul rope connected at one end to the burden-carrier 2, passing thence around suitable direction pulleys 11 on tower B to a hoisting drum 12. 13 is the outhaul rope or cable, which passes around a direction pulley 14 at the opposite end of the

system, and thence over suitable direction pulleys 15 on the carrier, to the tower B, where it is wound in an opposite direction around the drum 12.

In practice, by operating cable 10 or 13, the carriage 4 is run out to any suitable point on the cable 3, the fall line 6 slacked up to allow the scraper 2 to drop into suitable position, and then by appropriately operating one of the cables 10 or 13, according to which direction the scraper points, the latter is filled; thereupon the fall line 6 is wound up to suitably elevate the burden-carrier, to allow its transportation to the point of discharge, which may be at either end of the system. During the hoisting operations the carriage 4 remains stationary, and preferably the under side of the carriage is cut out, as shown at 16, between the direction sheaves 8, so that the fall block 5 may pass up into the carriage and between the sheaves 8, really bringing the fall line 6 into a straight line, so that if desired, practically the entire burden can be supported on the fall line, and little or none of the weight of the carriage 4 rest on the track cable 3; then by winding up one or other of the cables 10—13, and correspondingly slacking the other of said cables, the burden is transported to its desired destination, with the sheave 5 running on the fall line 6.

In Fig. 2 is shown a modification, in which the invention is adapted for use across a considerable stretch of land or water, where it is inconvenient or impractical to place the towers within the working limits of a burden-carrier and its carriage; or where it may be desired to work from both sides of a stream or claim at the same time. Thus, A' and B' represent towers set up at any suitable distance apart, with the stationary track cable 3' stretched between them. Each tower is provided with its hoisting and hauling machinery, and a carrier, as 2', is adapted to be operated from each tower. Fixed to the cable 3' at any suitable distance from either tower is a clamp or anchor member 17. Two fall lines 6' are attached to the clamp 17 and run in opposite directions to their respective hoists; each fall line passing around the sheaves 8' on their respective carriages 4'. Each burden-carrier has its respective inhaul and outhaul rope 10'—13', with the outhaul rope 13' passing around a respective sheave 19 on clamp 17, and thence back to its oper-

ating drum. The operation of each of the two carriers, fall lines and carriages is similar to that just described in connection with Fig.

1. Inasmuch as the point 17 may be located over the bed of a river, or other inaccessible place, the importance and value of a system such as described in Fig. 2 is manifest. The clamp 17 can be set at any point along the line of the cable 3' and remain fixed thereto until circumstances demand its change or adjustment.

With this system operations may go ahead from each hoist, and practically two systems are operating on a single track cable, with only two towers.

It is possible that various other changes may be made in the details of the invention without departing from the principle thereof, and I do not wish to be understood as limiting myself to the specific construction herein shown and described.

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

25 1. In an aerial cableway, the combination of a fixed track cable, a carriage to run on said cable, a fall line fixed at one end and passing over guide sheaves on the carriage, a fall block supported on the fall line between said
30 guide sheaves, means for winding up and unwinding the fall line, said carriage and guide sheaves constructed and arranged so that the fall line when wound up will present a substantially straight section between the guide
35 sheaves, and on which, as a track, the fall block will run, and inhaul and outhaul lines for reciprocating the block.

2. In an aerial cableway, the combination of a track cable supported at its ends, a pair of fall block carriages running on said cables, a fall line in connection with each carriage and running over guide sheaves on its respective carriage, each fall line connected to a stationary member on the track cable and between said carriages, a fall block supported on each fall line between the guide sheaves on a respective carriage, means for operating the fall lines, and means for reciprocating the carriages independently in either direction.

3. In an aerial cableway, the combination of a track cable supported at its ends, a pair of fall block carriages running on said cables, a fall line in connection with each carriage and running over guide sheaves on its respective carriage, each fall line connected to a stationary member on the track cable and between said carriages, a fall block supported on each fall line between the guide sheaves on a respective carriage, means for operating the fall lines, an outhaul line connected with the carriage and passing over a respective sheave on said fixed member between the carriages, and thence to a winding drum, and an inhaul cable connected with the corresponding carriage and winding in an opposite direction on said drum.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

WILLIAM S. LA SHELLS.

Witnesses:

CHARLES A. RUFIELD.
CHAS. E. TOWNSEND.