

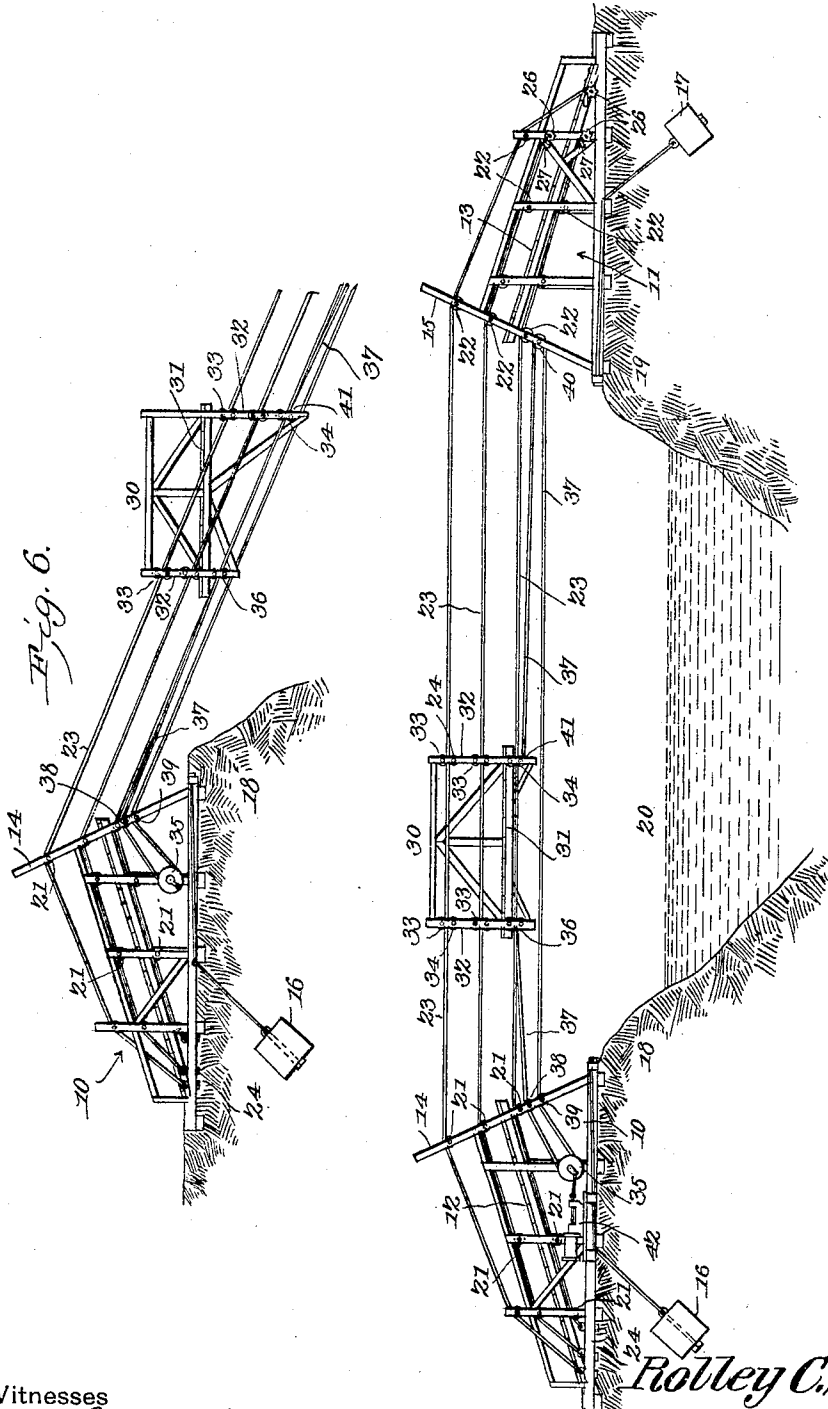
No. 813,745.

PATENTED FEB. 27, 1906.

R. C. SELF.
AERIAL TRAMWAY.

APPLICATION FILED SEPT. 13, 1905.

3 SHEETS—SHEET 1.



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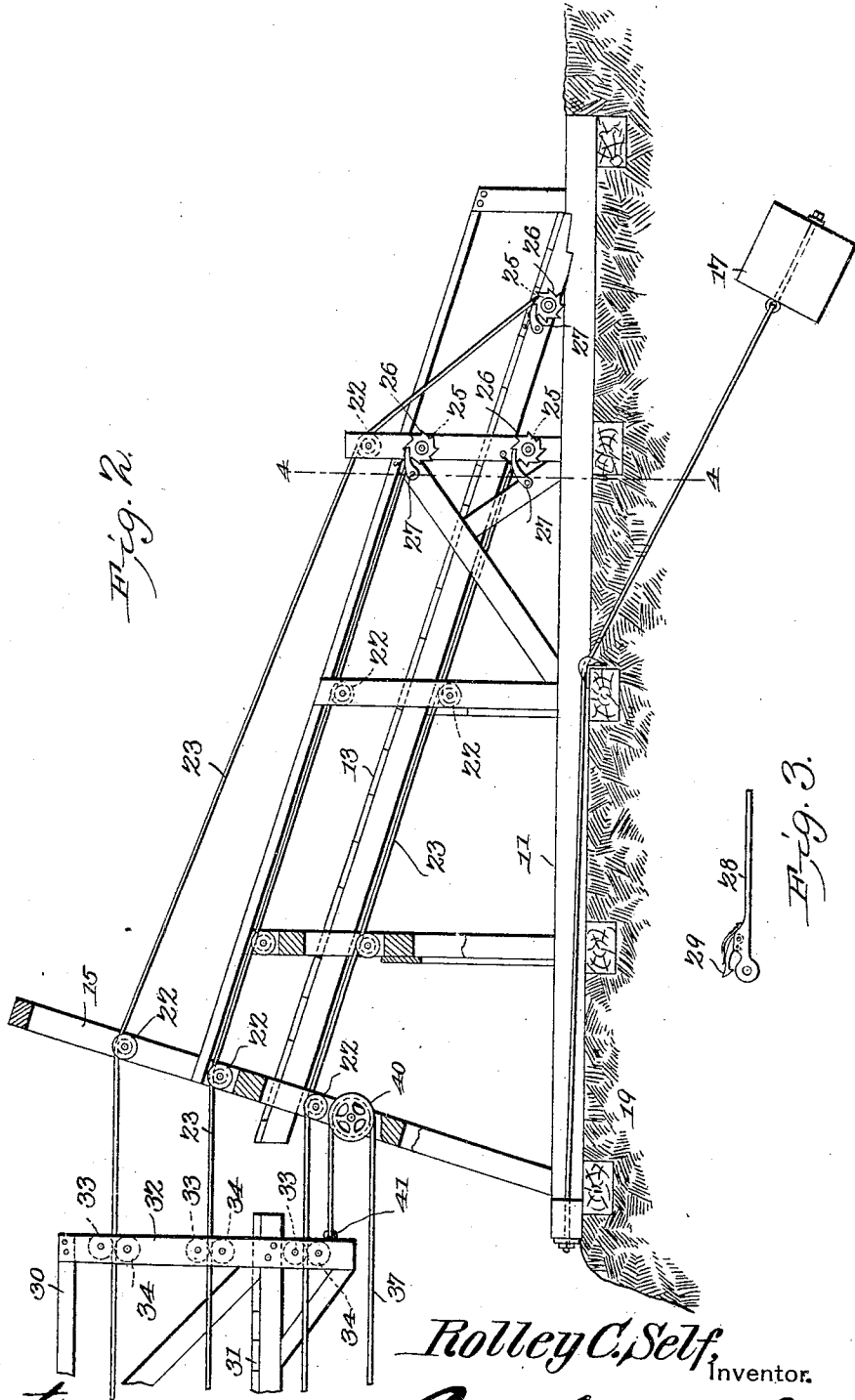
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3 SHEETS—SHEET 3.

Fig. 5.

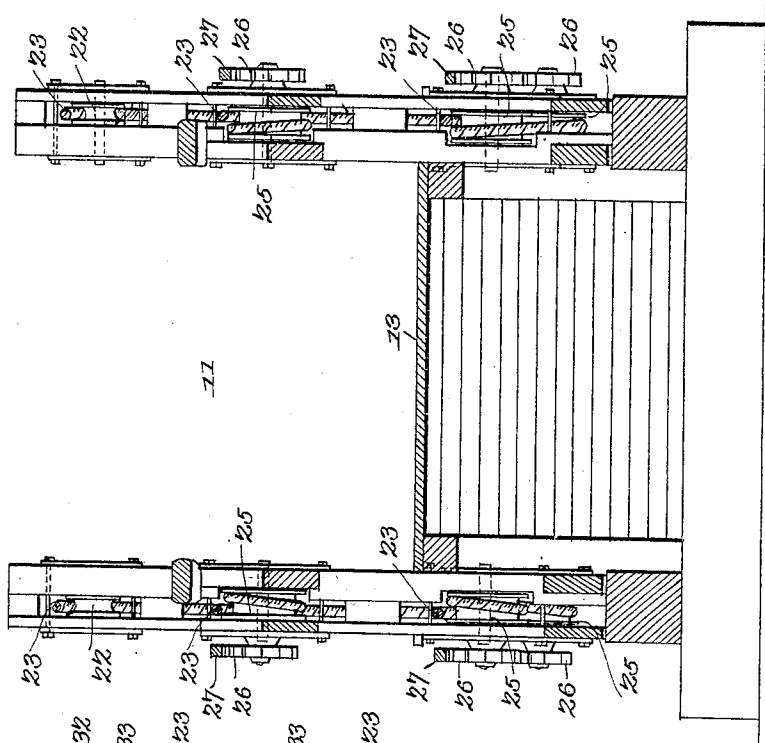
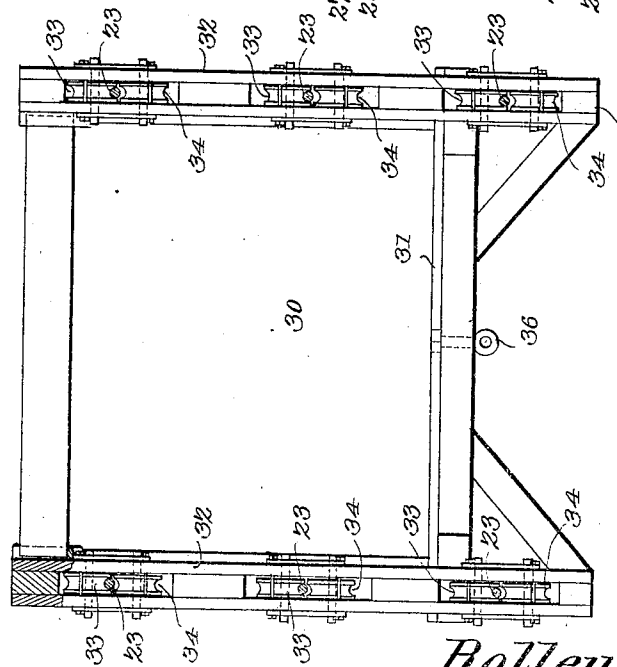


Fig. 4.



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UNITED STATES PATENT OFFICE.

ROLLEY C. SELF, OF NORMAN, OKLAHOMA TERRITORY.

AERIAL TRAMWAY.

No. 813,745.

Specification of Letters Patent.

Patented Feb. 27, 1906.

Application filed September 13, 1905. Serial No. 278,313.

To all whom it may concern:

Be it known that I, ROLLEY C. SELF, a citizen of the United States, residing at Norman, in the county of Cleveland and Territory of Oklahoma, have invented a new and useful Tramway, of which the following is a specification.

This invention relates to devices for transporting goods of various kinds or vehicles or other similar structures across streams, ravines, gorges, and like localities, and commonly known as "aerial tramways" or "ferries," and has for its object to improve the construction and increase the efficiency and utility of devices of this character.

With these and other objects in view, which will appear as the nature of the invention is better understood, the same consists in certain novel features of construction, as hereinafter fully described and claimed.

In the accompanying drawings, forming a part of this specification, and in which corresponding parts are denoted by like designating characters, is illustrated the preferred form of embodiment of the invention capable of carrying the same into practical operation.

In the drawings, Figure 1 is a side elevation of the improved apparatus in operative position. Fig. 2 is an enlarged side elevation, partly in section, of one of the approaches and portions of the track-cables and the carrier-car. Fig. 3 is a view of the winding-lever detached. Fig. 4 is an end elevation, partly in section, of the carrier-car. Fig. 5 is a view enlarged of one of the approaches in transverse section on the line 4 4 of Fig. 2. Fig. 6 is a side elevation of a portion of the device, illustrating a modification in the construction.

The improved device comprises two approaches of suitable construction erected upon opposite sides of the stream, ravine, gorge, or other locality over which the goods, animals, vehicles, or persons are to be carried, the approaches being suitably anchored, as at 16 17, to enable them to effectually withstand the strains to which they will be subjected. The approaches may be constructed in any required manner or of any required form or size, the size and form of the approaches varying with the condition under which they are employed. For the purpose of illustration two approaches of approved form are represented, respectively, at 10 11 with inclined roadways 12 13 and with the

forward members 14 15 extending upward, the structures 10 11 being suitably anchored, as before noted, at 16 17 in the banks 18 19 of the stream, (indicated at 20.) The members 14 15 of the approach structures are provided, respectively, with guide-sheaves 21 22, spaced apart and over which a plurality of track-cables 23 are conducted, the cables being coupled at one end, as at 24, to the approach structures 10 and leading at the other ends around drums 25 on the approach structure 11. The drums 25 are each provided with a ratchet-wheel 26 and holding-pawl 27, so that the drums when wound up to strain the cables may be held in the strained position. A winding-lever 28 is provided for operating the drums, and pivoted to said lever is a pawl 29 for engaging the ratchet-teeth of the wheels. By this means the tension of the cables may be controlled and undue slackness prevented, and in event of the stretching of the cables they can be easily tightened by simply rotating the drums a few turns with the lever.

The cables 23 are arranged at each side of the roadway, and the guide-sheaves 21 22 are arranged in vertical alinement at each side of the approach structures and in the members 14 15, so that the cables 23 are also disposed in vertical alinement at each side of the roadways of the approaches. A carrier platform or frame is suspended from the track-cables 23, and by thus arranging the cables in vertical alinement at the sides the platform or carrier is effectually supported and all tendency to tilt or sway obviated. The platform is represented as a whole at 30, with a floor 31 and vertical side members 32, the latter being arranged in pairs and provided with guide sheaves or trolleys 33 for bearing upon the cables. Each of the trolley-sheaves 33 is provided with a companion sheave 34, operating beneath it with the rims of each pair of associated sheaves close together, as shown more clearly in Fig. 4, to effectually prevent any tendency of the carrier to leave the cables or become otherwise displaced.

One pair of the cables 23 is disposed below the line of the floor 31 of the platform and the remainder above the floor, the upper cables being at or near the top of the framework to provide ample support for the carrier. The cables 23 will be so arranged that the floor 31 of the carrier and the inner terminals of the floors or roadways 12 13 of the approaches coincide when the platform is at the ends of its path for obvious reasons.

Attached to one of the approaches—as, for instance, the approach structure 10—is a drum 35, and connected at 36 to the carrier 30 is a draw-cable 37, leading thence over a guide-sheave 38 on the structure 10 and around the drum 35, and thence over a guide-sheave 39 on the structure 10, and thence around a guide-sheave 40 on the approach structure 11, and thence to the carrier 30, to which it is attached, as at 41. The cable will preferably be carried twice or more around the drum 35 to provide the requisite grip. By this arrangement it will be obvious that if the drum 35 be rotated in one direction the cable 37 will move the carrier 30 in one direction upon the track-cables, and if the movement of the drum be reversed the movement on the carrier will likewise be reversed. Any suitable power may be employed to operate the drum 35, depending somewhat upon the size of the apparatus and the width of the stream or other locality to be bridged; but for the purpose of illustration a conventional form of engine is indicated at 42 and connected to operate the drum.

The device is simple in construction, can be readily adapted to any width or depth of gorge or to banks disposed in any relative position, and to banks or other supports of different heights by merely constructing the carrier as shown in Fig. 6; but it will be obvious that these slight changes and modifications do not effect a departure from the principle of the invention, as the results produced and the means employed are substantially the same.

The device can be inexpensively manufactured and erected in many localities where an ordinary bridge cannot be used or employed as a temporary expedient in advance of the erection of a permanent bridge. The device may also be employed by bridge-builders in transporting material across chasms or streams while erecting bridges and other structures.

Having thus described the invention, what is claimed is—

1. In an apparatus of the class described, approaches disposed at opposite sides of the chasm to be crossed and anchored to the

banks of the same, inclined braces forming part of the approaches and provided with a plurality of spaced sheaves, track-cables engaging said sheaves, a car mounted for travel on the track-cables, means for adjusting the tension of the cables, and a draw-cable secured to the bottom of the car for imparting movement to the latter.

2. In an apparatus of the class described, inclined approaches disposed at opposite sides of the chasm to be crossed and anchored to the banks of the same, inclined braces forming a part of the approaches and provided with a plurality of spaced track-engaging sheaves, a guide-sheave of greater diameter than the adjacent sheaves mounted for rotation between the inclined braces of each approach, track-cables engaging the track-sheaves, a car mounted for travel on the track-cables and provided with vertical standards having corresponding sheaves journaled therein for engagement with the track-cables, means for adjusting the tension of the track-cables, and a draw-cable secured to the bottom of the car and engaging the guide-sheaves for imparting movement to the car.

3. In an apparatus of the class described, inclined platforms disposed at opposite sides of the chasm to be crossed and anchored to the banks of the same, inclined braces secured to the platforms and provided with a plurality of spaced track-engaging sheaves, vertical braces disposed on opposite sides of the platforms and provided with similar sheaves, track-cables engaging the sheaves in the inclined braces and disposed above and below the platforms for engagement with the sheaves in the vertical braces, means for regulating the tension of the cables, a car mounted for travel on the track-cables, and a draw-cable secured to the bottom of the car and engaging guide-sheaves in the inclined braces for imparting movement to said car.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

ROLLEY C. SELF.

Witnesses:

C. H. BESSENT,
R. E. CLEMENT.