

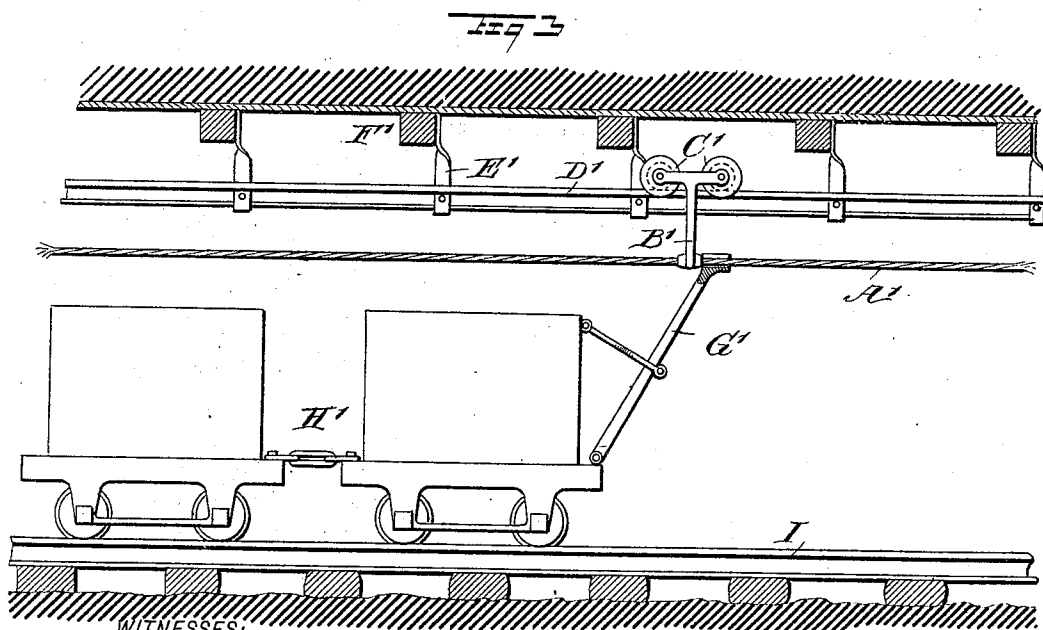
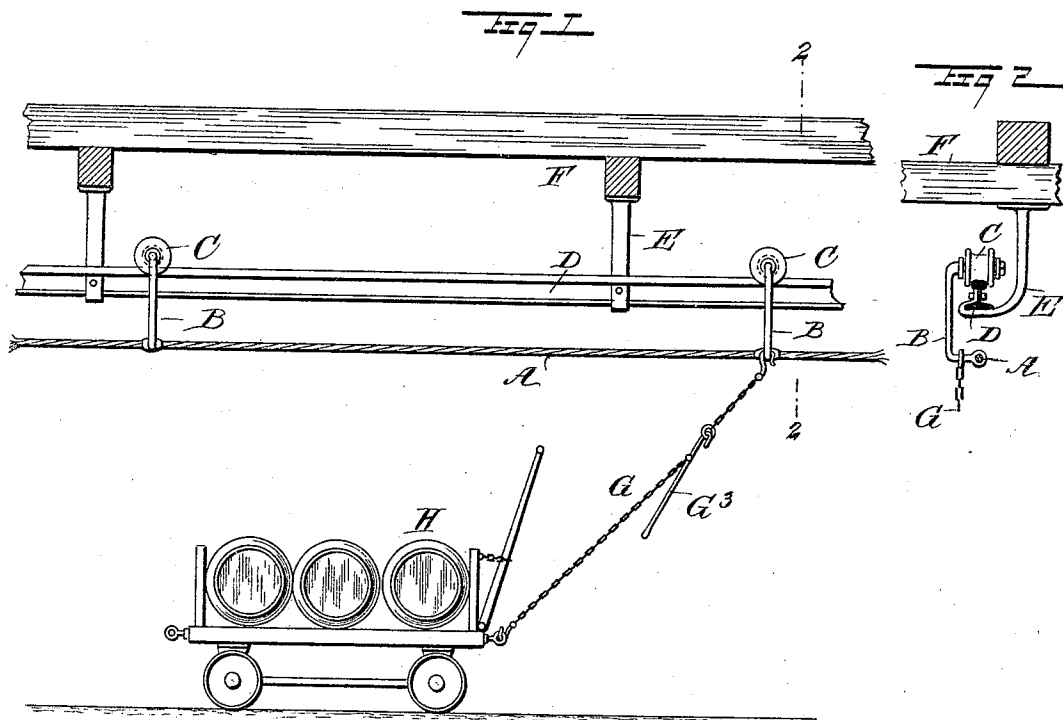
(No Model.)

2 Sheets—Sheet 1.

W. G. BERG.
OVERHEAD CABLE TRACTION.

No. 519,561.

Patented May 8, 1894.



WITNESSES:

H. Walker
C. Sedgwick

INVENTOR

W. G. Berg
BY Munn & Co

ATTORNEYS.

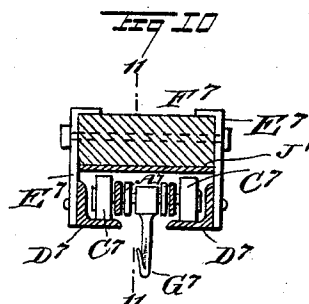
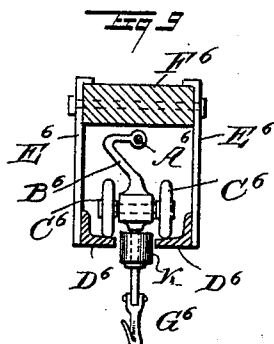
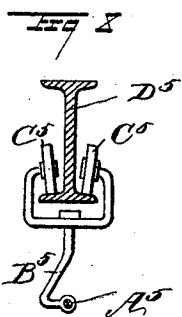
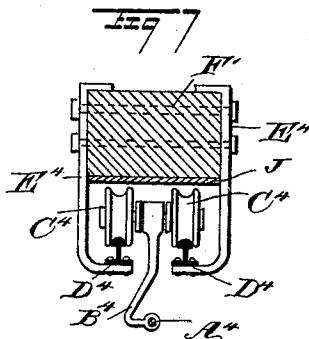
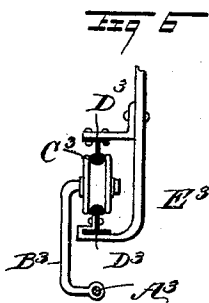
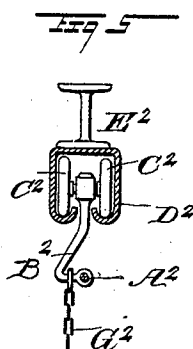
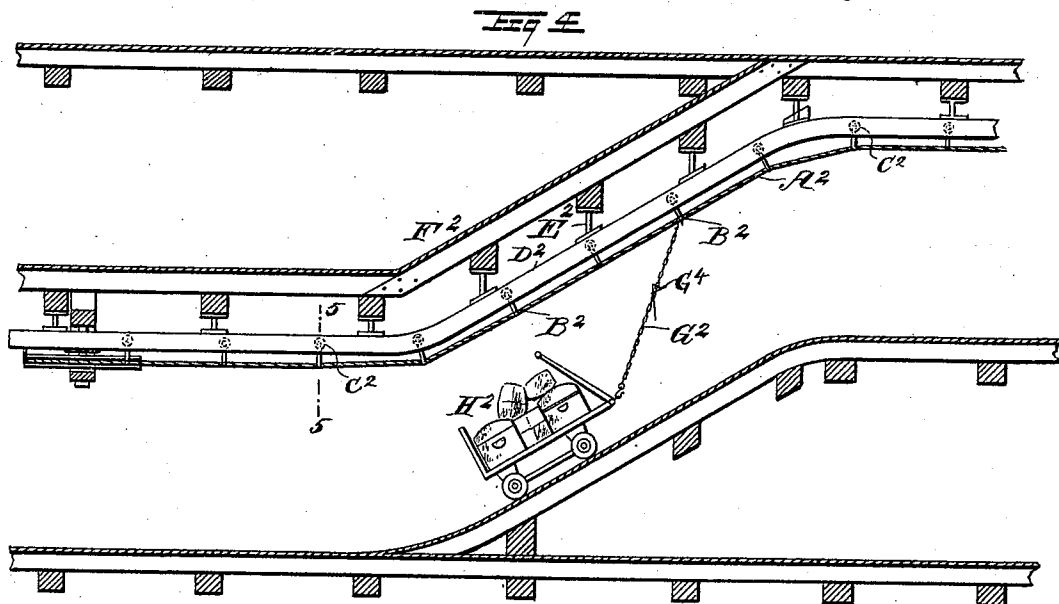
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2 Sheets—Sheet 2.

W. G. BERG.
OVERHEAD CABLE TRACTION.

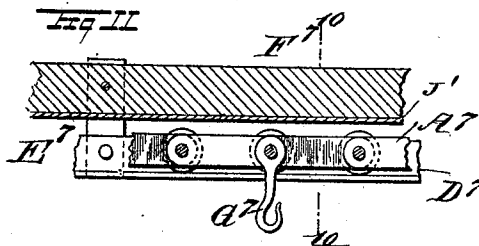
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WITNESSES:

H. Walker
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UNITED STATES PATENT OFFICE.

WALTER G. BERG, OF NEW YORK, N. Y.

OVERHEAD-CABLE TRACTION.

SPECIFICATION forming part of Letters Patent No. 519,561, dated May 8, 1894.

Application filed November 11, 1893. Serial No. 490,630. (No model.)

To all whom it may concern:

Be it known that I, WALTER G. BERG, of the city, county, and State of New York, have invented a new and Improved Overhead-Cable traction, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved overhead cable traction, which is simple and durable in construction, and designed for propelling cars and other vehicles in warehouses, mines, on wharves and other places, for conveniently and rapidly transporting persons, merchandise and other articles from one place to another.

The invention consists of certain parts and details, and combinations of the same, as will be hereinafter described and then pointed out in the claim.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a sectional side elevation of the improvement. Fig. 2 is a transverse section of the same on the line 2—2 of Fig. 1. Fig. 3 is a side elevation of the improvement with parts in section and as arranged for mines. Fig. 4 is a like view of the improvement as arranged for warehouses to propel the load from one floor to another and along said floors. Figs. 5, 6, 7, 8 and 9 are enlarged cross sectional views on line 5—5 Fig. 4 of various forms of hangers employed in connection with the improvement. Fig. 10 is a cross section showing a chain belt instead of a cable, as the moving power, the section being taken on the line 10—10 of Fig. 11; and Fig. 11 is a longitudinal section of the same on the line 11—11 of Fig. 10.

The improved overhead cable traction, as illustrated in Fig. 1, is provided with an endless cable A, passing around grooved wheels at the ends of the track, one or both wheels being turned by suitable machinery to impart a traveling motion to the said cable. The cable A is supported between the end wheels by series of hangers or arms B, placed suitable distances apart and rigidly connected with the cable A. Each hanger B carries a grooved pulley or wheel C, traveling on an overhead track rail D, made continuous and supported by brackets E, placed suitable dis-

tances apart and attached to the ceiling or other overhead support F. The cable A is connected by a chain, rope, or other suitable flexible connecting device G, with the vehicle H, to be propelled over the ground, floor or separate track, to carry persons, merchandise or other articles from one place to another. The said connecting device consists of two detachably connected parts one of which is secured to the vehicle and the other to the cable or chain.

As shown in Fig. 1, the chain G is provided with a hook adapted to hook on the hanger B, and the chain is also provided with a throw-off lever or hook or other suitable device G³ to readily disconnect the upper part of the chain whenever desired, at the time the vehicle H is at its destination.

As illustrated in Fig. 3, the cable A', is supported on hangers B', having two grooved wheels C', traveling on the overhead track D', supported by brackets E', from the roof F', of a mine, tunnel, &c. In this case the front car H', traveling on the track I, is connected by a link G', with the cable A', in front of the hanger B', so that the latter with the cable moving forward propels the car forward on the track I.

As illustrated in Fig. 4, the device is especially designed for warehouses in which the load is to be transported from one floor to another and along said floors. In this case I prefer to make the track D², in the shape of a duct or channel, as plainly shown in Fig. 5, in which travel the wheels C² journaled on the hangers B², at opposite sides thereof, the said hangers depending downward through the slot in the channel to carry at its lower end the cable A². The track D² is supported on brackets E² from the ceiling F² of the warehouse, as will be readily understood by reference to Fig. 4. The chain or rope G² connects the hanger B² with the vehicle H² traveling on the floor and over an incline from one floor to another.

The chain or rope G² is provided with a throw-off lever or hook or other suitable device G⁴, to allow said chain or rope to be released at will or while under strain.

In order to prevent the grooved pulleys or wheels from leaving the track, the top of the channel D² is closed to the upper edge of the

wheels, as will be readily seen in Fig. 5; and for the same purpose the wheel C³ as shown in Fig. 6, may travel between two rails D³ held on the bracket E³. The wheel C³ carries the usual hanger B³ attached to the endless traveling cable A³.

As shown in Fig. 7 two parallel rails D⁴ are supported on oppositely-arranged brackets E⁴ attached to the support F⁴, and on the two rails travel the grooved wheels C⁴ journaled on the upper end of the hanger B⁴ attached to the cable A⁴. An iron plate J, attached to the support F⁴, immediately above the wheels C⁴, is preferably introduced to prevent the said wheels from leaving the track and reducing thereby the resulting friction, when such a tendency exists.

The track D⁵ as illustrated in Fig. 8, is made in the shape of an I-beam, the wheels C⁵ traveling on the upper surface of the base of the said I-beam and the said wheels are journaled in the forked upper end of a hanger B⁵ attached to the cable A⁵.

As illustrated in Fig. 9, the cable A⁶ is above the track D⁶ and pulleys C⁶, by extending the hanger B⁶ upward and inward, so as to bring the cable close to the overhead support F⁶. The lower end of the hanger B⁶ is provided in this case with a hook G⁶, for connection with a chain leading to the vehicle to be propelled.

In Fig. 9 is also shown a horizontal roller or wheel K on the hanger B⁶, the function of said roller being to reduce the friction of the edges of the track D⁶ on the hanger B⁶, whenever a tendency exists for the said hanger to rub along the edges of said track, it being understood that the said roller or wheel K is equally applicable in the devices shown in Figs. 5, 7 and 10.

As illustrated in Figs. 10 and 11, a chain belt A⁷ instead of a cable is employed, and in this case I prefer to provide the chain belt with rollers or wheels C⁷ traveling on a track D⁷ held on brackets E⁷ attached to the over-

head support F⁷. The chain belt A⁷ is provided with depending hooks G⁷ for connection with a chain leading to the vehicle to be propelled forward. It is understood that the rollers C⁷ greatly reduce the friction of the traveling chain belt, which friction would otherwise cause considerable loss of power in imparting movement of the chain belt traveling directly on a fixed track. An iron plate J' attached to the support F⁷ immediately above the wheels C⁷ is preferably introduced the said plate J', being for the same purpose as the plate J above referred to.

It is understood that I do not limit myself to any especial construction or form of track, hanger, wheels or overhead support, as the same may be varied according to the requirements.

I am aware that it is not new to employ an overhead traveling cable for supporting and transferring vessels, boxes, cages and the like, and my overhead system is for propelling vehicles traveling on the ground or on tracks, but not for supporting their weight and carrying the same from one place to another.

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

A system of overhead cable traction, comprising an overhead fixed track, hangers provided with wheels adapted to travel on the said track, an endless traveling cable or chain rigidly connected to the hangers, and a flexible connection between the said cable or chain and a vehicle traveling on the ground or on a track, one part of the said connection being secured to the vehicle, and the other to the cable or chain, and the two parts being provided with means for detachably connecting them, substantially as described.

WALTER G. BERG.

Witnesses:

THEO. G. HOSTER,
EDGAR TATE.