


(No Model.)

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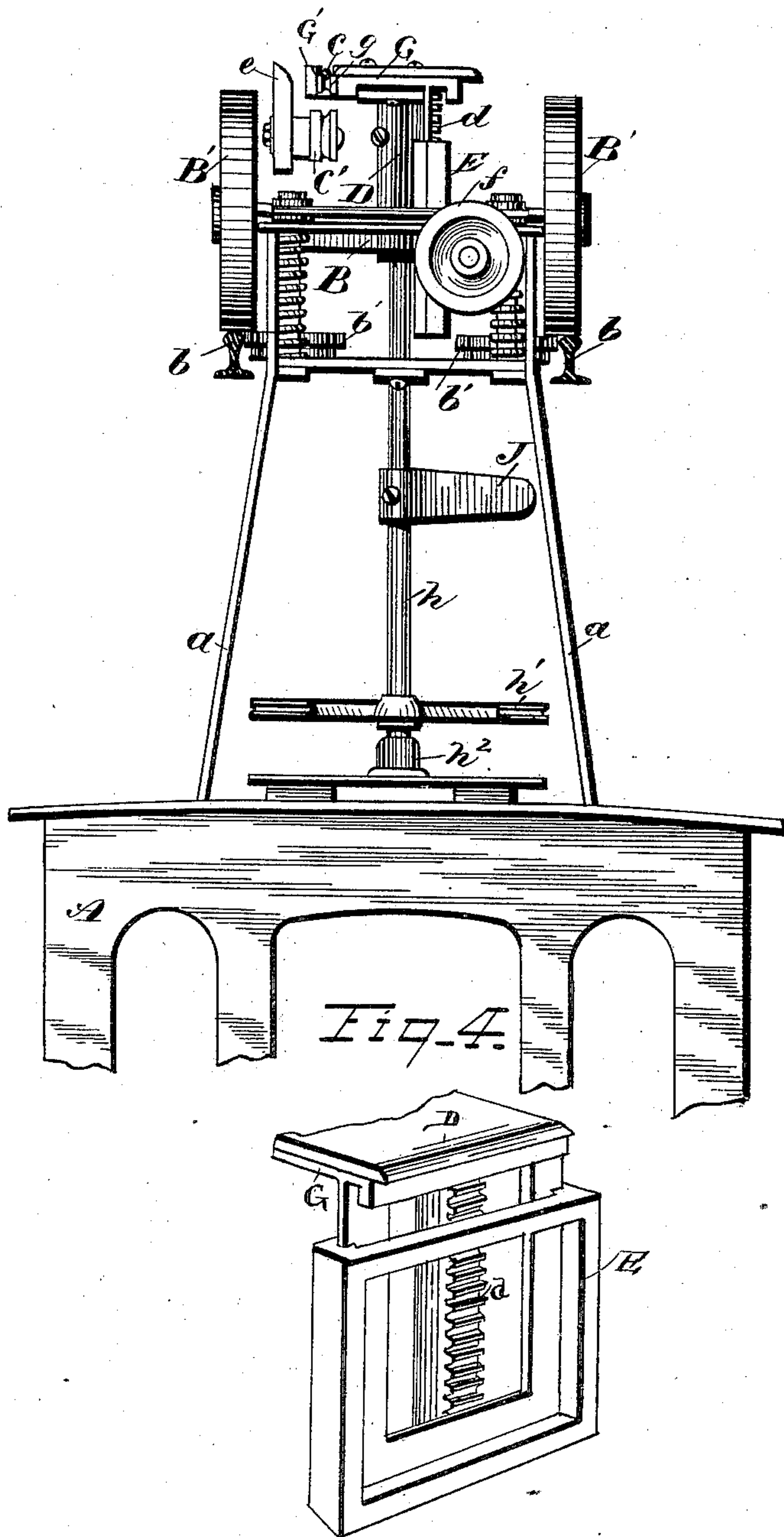
C. LEAVITT.

## SUSPENDED CAR FOR CABLE ROADS.

No. 302,746.



Patented July 29, 1884.



WITNESSES

Y<sup>rs</sup> M. Monroe.

Geo. W. King

*INVENTOR*

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Charles Learist.

Leggett & Leggett.

Attorneys

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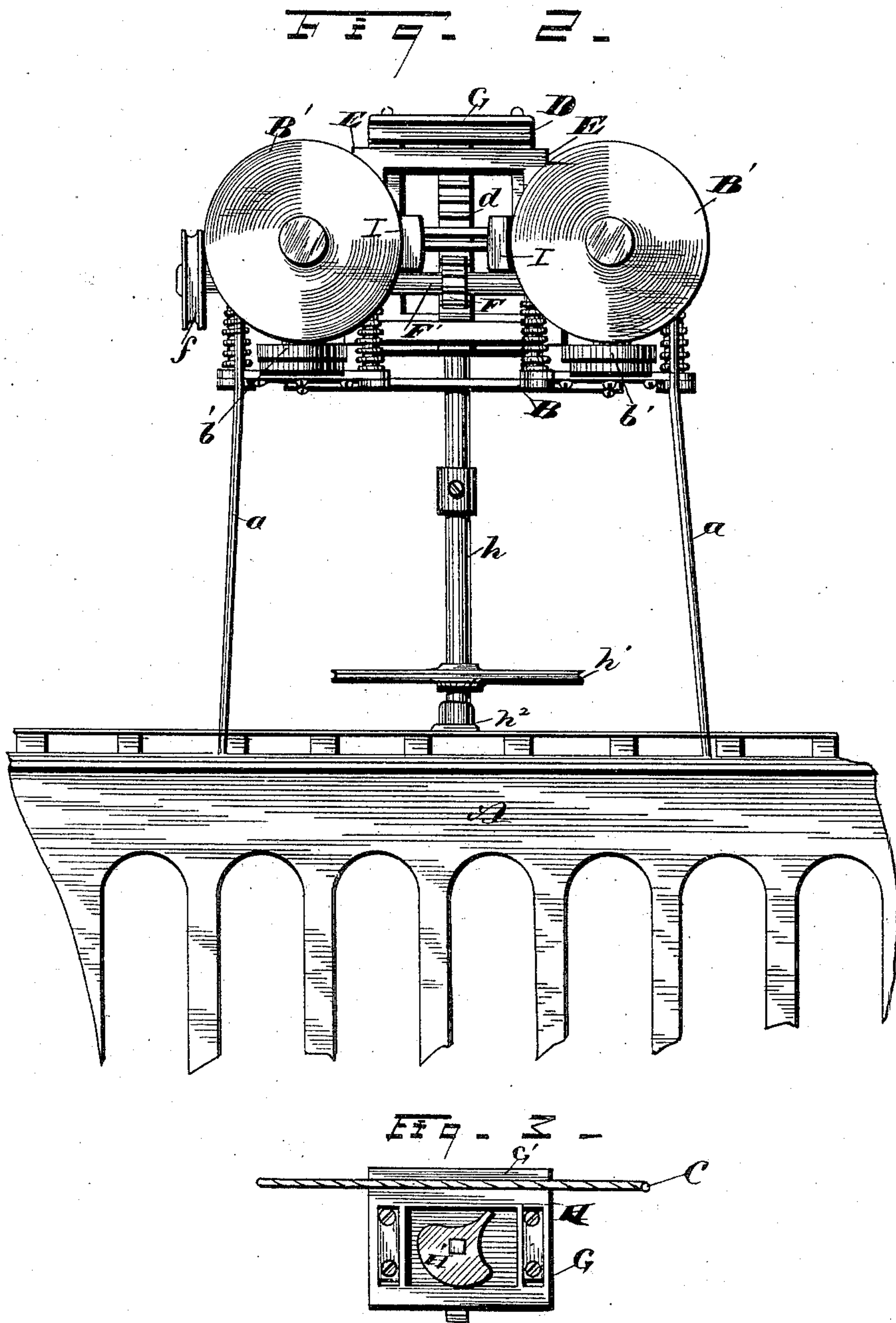
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# UNITED STATES PATENT OFFICE.

CHARLES LEAVITT, OF CLEVELAND, OHIO.

## SUSPENDED CAR FOR CABLE-ROADS.

SPECIFICATION forming part of Letters Patent No. 302,746, dated July 29, 1884.

Application filed April 29, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES LEAVITT, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Suspended Cars for Cable-Roads; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same.

My invention relates to improvements in elevated cable-railways, and more especially to mechanism for raising and gripping the cable on cars that are suspended under the track, the object being to provide a vertically-moving frame with a laterally-projecting head provided with a clutch for gripping the cable, and mechanism for operating the frame and clutch from the car, and so arranged that by raising the frame the cable is lifted by the projecting head from the carrying-wheel, so that when the cable is gripped and the car propelled thereby the projecting head passes over the carrying-wheels, and when the frame is depressed the head passes the carrying-wheels.

With these objects in view my invention consists in certain features of construction and in combination of parts hereinafter described, and pointed out in the claims.

My invention is designed as an improvement on devices for which I have already obtained Letters Patent of the United States, to wit: No. 211,026, dated December 17, 1878, and No. 264,464, dated September 19, 1882.

In the accompanying drawings, Figure 1 is an end elevation of the car and my improved device. Fig. 2 is a side elevation of the same. Fig. 3 is a plan view of the clutch for gripping the cable; and Fig. 4 is a detached view of the sliding frame and its guide.

A represents the car, suspended by the rods *a* from the truck B, that is mounted on the flangeless wheels B', that engage the tracks *b*, and are guided by the lateral wheels *b'*.

C represents the cable supported on the overhanging carrying-wheels C', that are journaled on suitable axles secured to one side of the support *e*, as shown.

D is a vertically-sliding frame operating in

guides E, attached to the truck-frame, and provided with the rack *d*, that engages the pinion F, that is mounted on the shaft F', journaled in suitable boxes attached to the truck-frame, and is provided with the grooved wheel *f* or equivalent lever device, and to which a cord is attached leading to the car below, and by means of which the frame D and attachments are raised or lowered, as required.

To the frame D is secured the overhanging head G, provided with a gripping device hereinafter described, and with the friction-rollers *g*. When the frame D is in its lowest position, the head G passes under the wheels C', that are usually about thirty feet (more or less) apart; or the frame D may be raised until the head G will pass above the wheels C', and the relation of parts is such that the cable comes in contact with the rollers *g* and is raised with the head, and held in position to be gripped by the clutch that is shown more clearly in Fig. 3. The head G has an upwardly-projecting rib, G', that forms one side of the clutch, and has a sliding frame, H, that forms the other side of the clutch. The frame H is reciprocated by the cam H', and made to release or grip the cable, as desired. This cam is firmly secured to the end of the upright shaft *h*, the lower end of which is provided with the grooved wheel *h'*, to which cords are attached leading to the platform of the car, and by means of which the clutch is operated. The lower portion of the shaft *h* is provided with a groove, and the wheel *h'* with a feather, and the shaft slides through the wheel *h'* and the box *h''* as it is raised or lowered with the frame D.

The shaft *h* may be provided with a cam (not shown) for operating the brakes I I, and may have a laterally-projecting arm, J, that may engage stops along the track and automatically releasing the cable-clutch. These last-named devices are fully described in my former patent, and it is not considered necessary to further describe them here.

What I claim is—

1. The combination, with an elevated track-way, a cable, and cable-supporting wheels, of a truck, a car suspended from the truck, a vertically-sliding frame attached to the truck, and gripping devices attached to the frame, all of

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the above parts operating substantially as set forth.

2. The combination, with an elevated trackway, a cable located above the trackway, and  
5 cable-supporting rollers, of a truck the wheels of which rest on the trackway, a car suspended from the truck below the trackway, a vertically-movable frame provided with a rack-bar, a pinion engaging the rack-bar, devices,  
10 substantially as described, for operating the

pinion, and the gripping device attached to the frame.

In testimony whereof I sign this specification, in the presence of two witnesses, this 11th day of April, 1884.

CHARLES LEAVITT.

Witnesses:

CHAS. H. DORER,  
ALBERT E. LYNCH.