

(No Model.)

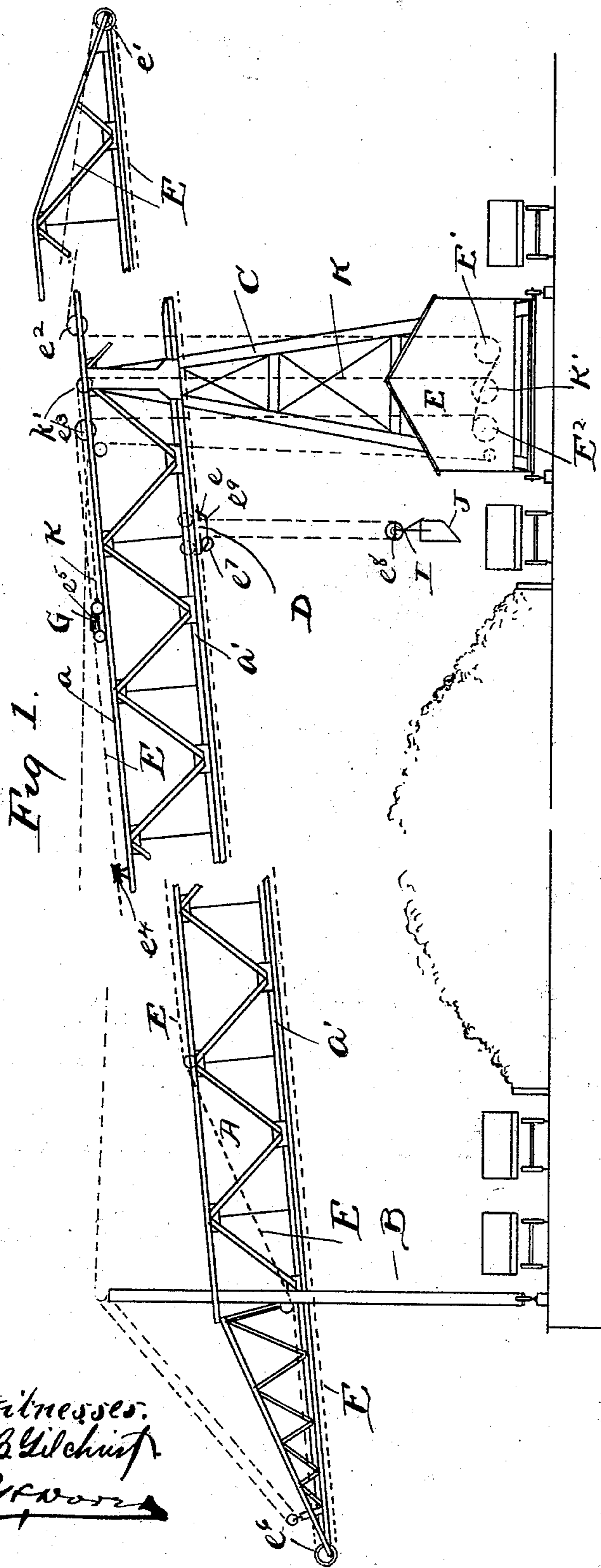
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P. RASCH.

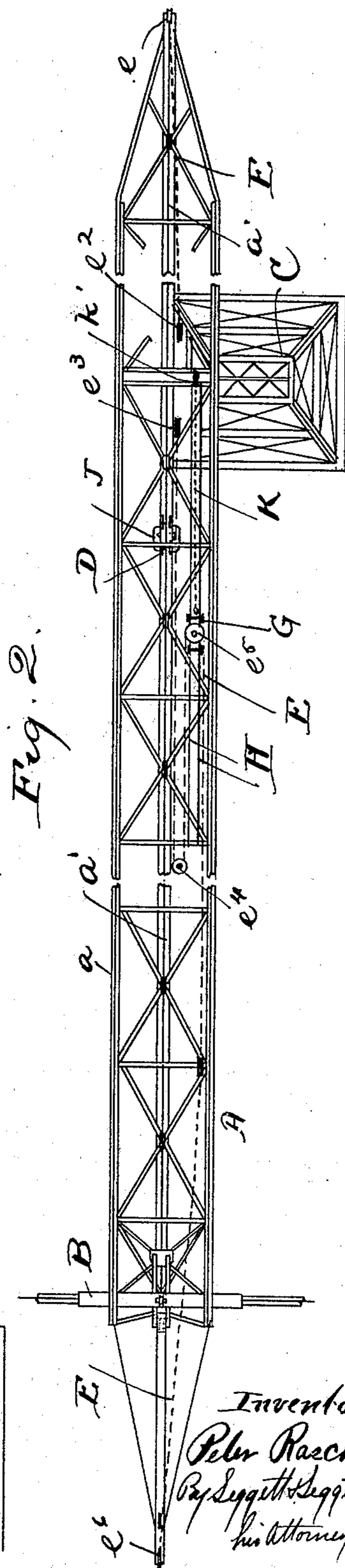
HOISTING AND CONVEYING APPARATUS.

No. 505,637.

Patented Sept. 26, 1893.



Witnesses:
E. B. Gilchrist
C. W. W. W.



Inventor,
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By Suggitt & Suggitt
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(No Model.)

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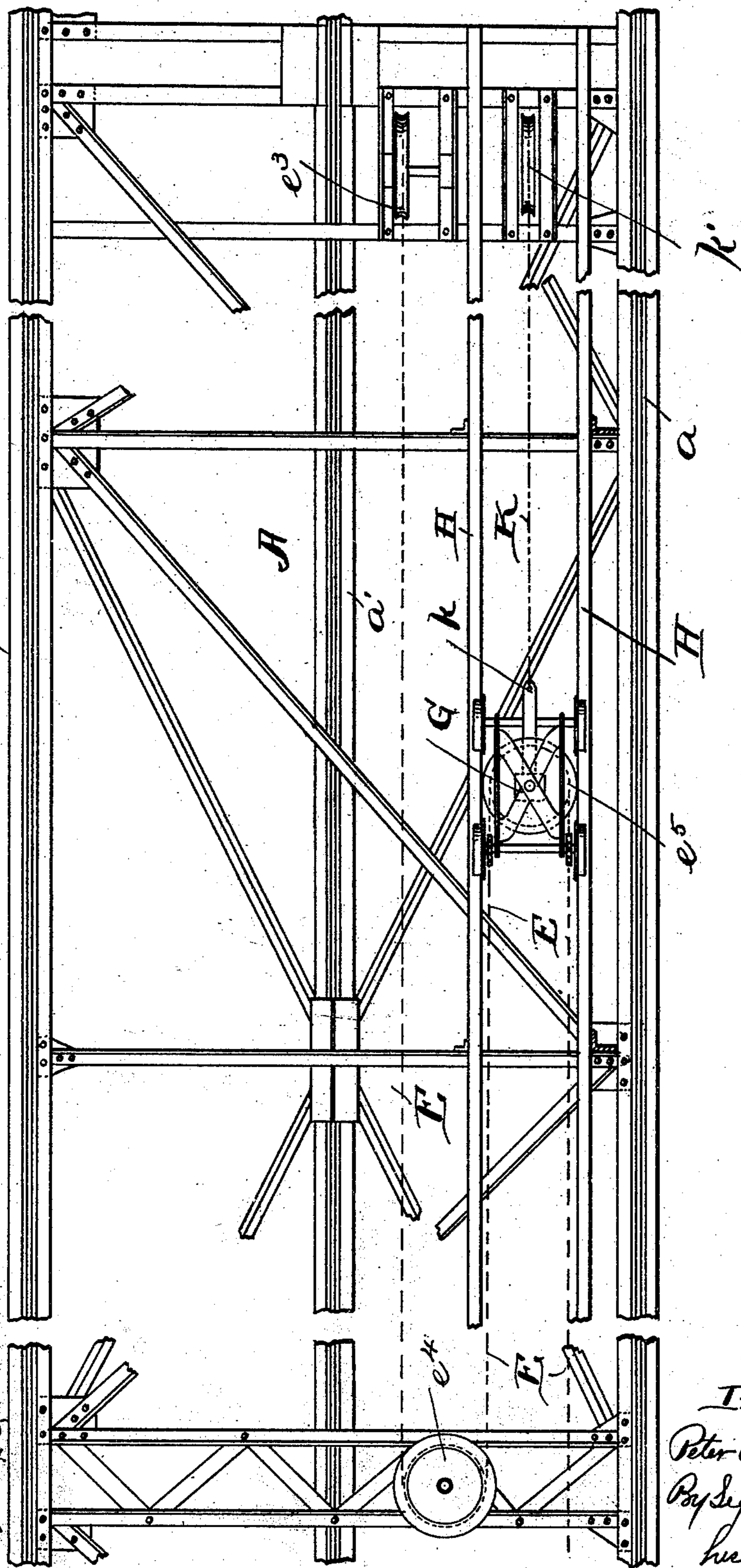
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Fig. 3.



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UNITED STATES PATENT OFFICE.

PETER RASCH, OF CLEVELAND, OHIO, ASSIGNOR TO THE KING BRIDGE COMPANY, OF SAME PLACE.

HOISTING AND CONVEYING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 505,637, dated September 26, 1893.

Application filed October 1, 1892. Serial No. 447,578. (No model.)

To all whom it may concern:

Be it known that I, PETER RASCH, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful
5 Improvements in Hoisting and Conveying Apparatus; 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
10 and use the same.

My invention relates to improvements in hoisting and conveying apparatus; and it consists more especially in the combination with an elevated track, load-carriage mounted on
15 said track and a hoisting and propelling rope or cable for propelling said carriage and provided with fall and tackle, of a second elevated track, a sheave-carriage mounted on said last-mentioned track, and operatively
20 connected with the aforesaid hoisting and propelling rope or cable in such a manner that said tackle may be conveniently hoisted and lowered at any point along the route of the load-carriage.

25 In the accompanying drawings, Figure 1 is a side elevation of hoisting and conveying apparatus embodying my invention. Fig. 2 is a top plan of the same. Fig. 3 is an enlarged top plan showing more clearly the
30 sheave or carriage, G, the track upon which it is mounted, and the operative connection of said carriage with the hoisting and propelling rope or cable.

The figures, to reduce their size, have portions broken away.

35 In the drawings is shown an elevated bridge tramway comprising a bridge or truss, A, supported at or near its opposite ends by a pier or tower; B representing the front or outer
40 pier or tower, and C the inner or rear pier or tower. Bridge or truss A shown is of the triangular variety, the upper chords a and lower chord a' being arranged parallel with each other and extending lengthwise of the
45 bridge or truss, and tied and braced together in any suitable manner, the lower chord being located centrally of the upper chord and constituting a track for the wheeled load-carriage D. The rear or inner pier or tower supports the engine-house containing the machinery for operating the hoisting and propelling

rope or cable E, (shown in broken lines) whereby the load-carriage is propelled and whereby the hoisting-bucket is elevated and lowered. The two ends of the hoisting and propelling rope or cable are attached to the load-carriage, one end being attached, for instance, at e , whence it leads to and over a sheave, e' , at one end of the route, in the present instance, the inner or rear end of the route and
55 thence returns and leads over sheave e^2 secured to the top of the bridge or truss above the engine-house, whence it leads downward to and around drum E' (shown in dotted lines) in the engine-house, being usually coiled once
60 or twice around said drum to give the necessary friction. The propelling rope or cable thence leads to and around another drum, E^2 , (in dotted lines Fig. 1) also in the engine-house, but in the opposite direction, and is
65 coiled once or twice around said last-mentioned drum to give the necessary friction. The rope or cable thence leads upwardly to and over sheave, e^3 , secured to the top of the truss or bridge above the engine-house and
70 thence leads toward the opposite end of the route, in the present instance, toward the forward or outer end of the bridge or truss, to and over sheave e^4 also secured to the top of the bridge or truss. The rope or cable thence
75 returns and leads over a sheave, e^5 , of carriage, G, that is mounted upon a track, H, rigid with the top and arranged lengthwise of the bridge or truss throughout a portion of its entire length at least. From said sheave-
80 carriage the rope or cable leads to and over a sheave e^6 , at the forward end of the bridge or truss, leading over one or more intervening guide-sheaves, as the case may be, and from sheave e^6 , the rope or cable returns to
85 and leads over a sheave, e^7 , with which the load-carriage, D, is provided. At the load-carriage the hoisting and propelling rope or cable is provided with fall and tackle, the rope or cable leading downward over sheave
90 e^8 of the tackle I that supports the hoisting-bucket J, and thence returning to the load-carriage, where it is secured, as for instance, at e^9 .

K represents a rope or cable (shown in heavy
100 broken lines) secured to the carriage, G, as at k , and thence leading to and over sheave

k' at the top of the bridge or truss, and thence leading downward into the engine-house to the hoisting-drum K' where it is secured.

By the construction hereinbefore described, it will be observed that the load-carriage is propelled in the one direction or the other according as the propelling rope or cable is wound upon the one or the other of the drums E' E^2 , and that, by means of sheave-carriage G and the manner in which said sheave-carriage is operatively connected with the hoisting and propelling rope or cable, the hoisting-tackle may be elevated or lowered at any point along the route of the load-carriage, it being merely necessary to wind or unwind rope or cable K upon or from hoisting-drum K' according as it is desired to elevate or lower the hoisting-bucket. It will of course be understood that the hoisting-bucket is elevated by causing sheave-carriage G to be moved or propelled in the direction toward the rear or inner tower by winding the rope or cable K upon the hoisting-drum, and that the hoisting-bucket will lower by gravity and cause said sheave-carriage to move in the opposite direction upon permitting the hoisting-drum to rotate to unwind said rope or cable.

What I claim is—

1. In hoisting and conveying apparatus, the combination with an elevated track, a load-carriage mounted on said track and a hoisting and propelling rope or cable for propelling said carriage, said rope or cable being provided with fall and tackle for supporting the hoisting-bucket, of a second elevated track, as at H , a carriage mounted on said second elevated track, said last-mentioned carriage being operatively connected with the hoisting and propelling rope or cable in such a manner that the hoisting-bucket may be elevated and lowered at any point along its route, being elevated upon the movement of

said carriage in the one direction and lowered by gravity, substantially as set forth.

2. In hoisting and conveying apparatus, the combination with an elevated track, load-carriage mounted on said track, and a hoisting and propelling rope or cable for propelling said carriage, and provided with fall and tackle for supporting the hoisting-bucket, of a second elevated track, as at H , a sheave-carriage mounted on said second elevated track, the sheave-carriage being operatively connected with the hoisting and propelling rope or cable in such a manner that the hoisting-bucket may be elevated or lowered at any point along the route of the load-carriage, and suitable means for propelling said sheave-carriage in the direction to elevate the hoisting-bucket, substantially as set forth.

3. In a hoisting and conveying apparatus, the combination with an elevated track, a load-carriage mounted upon said track, a single and continuous hoisting and propelling rope or cable for propelling said carriage in opposite directions and provided with fall and tackle, of a second elevated track, as at H , a sheave-carriage mounted on said track and operatively connected with the hoisting and propelling rope or cable in such a manner that the aforesaid tackle is elevated or lowered according as said sheave-carriage moves in the one direction or the other, and a hoisting-drum and rope or cable for propelling said sheave-carriage in the direction to elevate the aforesaid tackle, substantially as set forth.

In testimony whereof I sign this specification, in the presence of two witnesses, this 20th day of August, 1892.

PETER RASCH.

Witnesses:

C. H. DORER,
WARD HOOVER.