

(No Model.)

J. J. TRAINOR.
HOISTING AND DUMPING APPARATUS.

No. 552,017.

Patented Dec. 24, 1895.

Fig. 1.

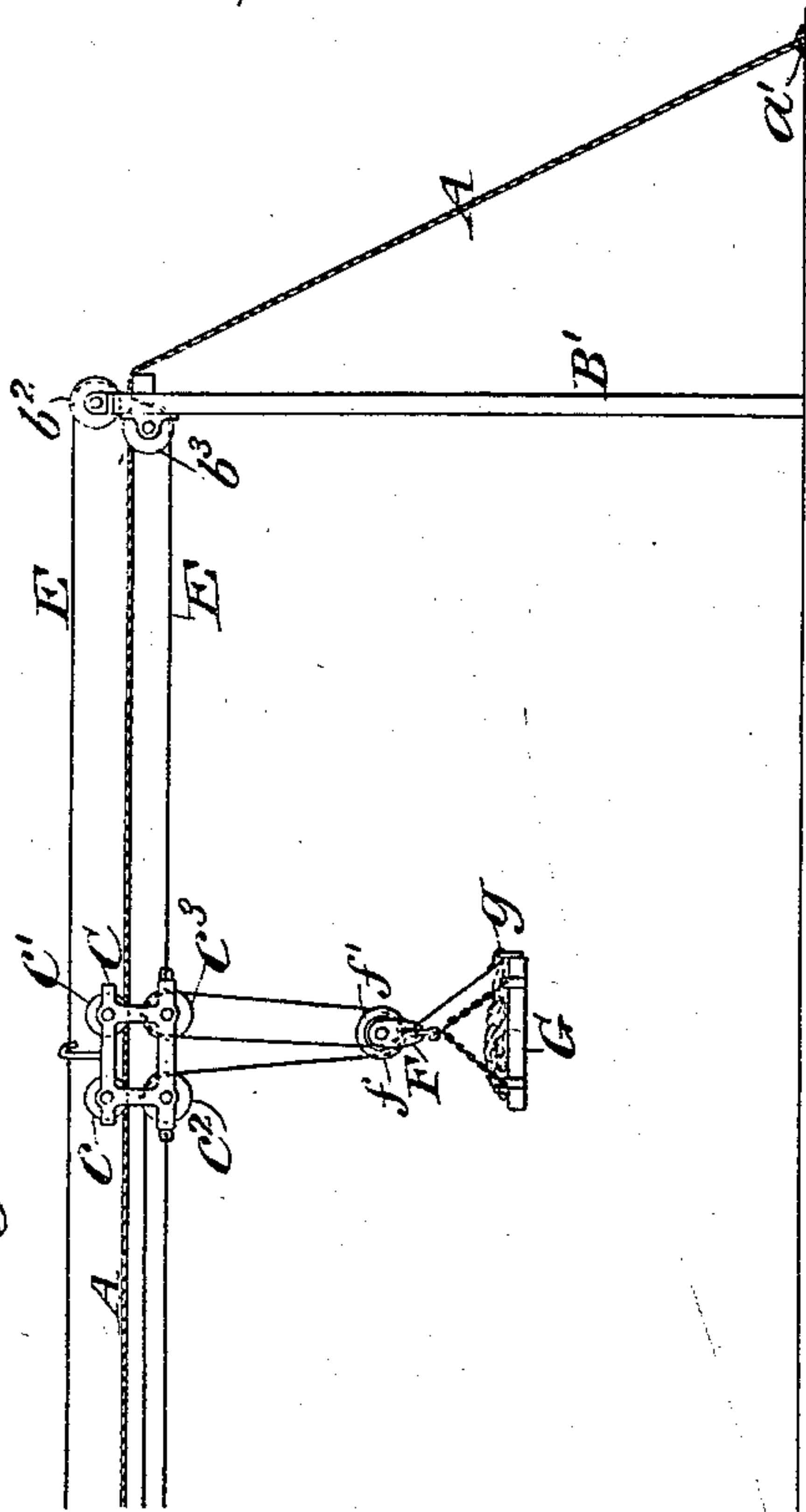


Fig. 2.

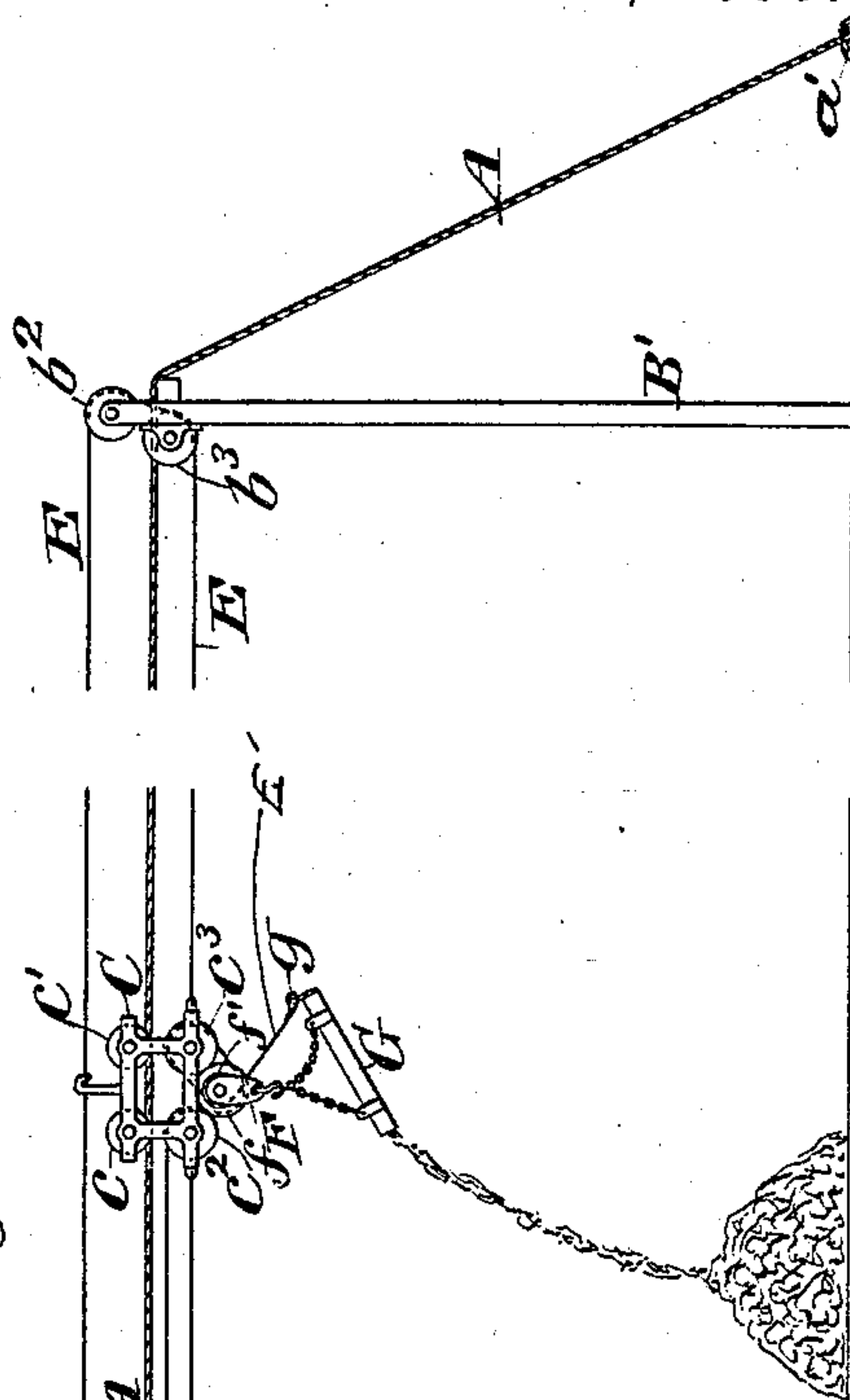
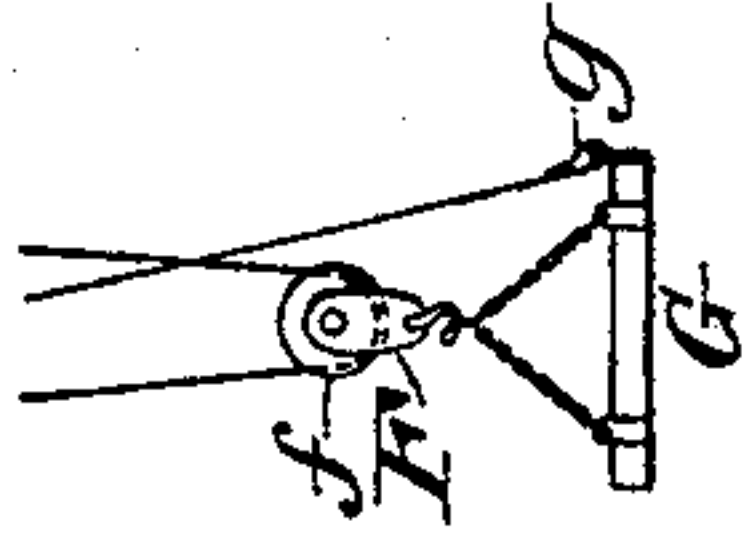


Fig. 3.



Witnesses:
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UNITED STATES PATENT OFFICE.

JOHN J. TRAINOR, OF NEW YORK, N. Y.

HOISTING AND DUMPING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 552,017, dated December 24, 1895.

Application filed November 30, 1894. Serial No. 530,313. (No model.)

To all whom it may concern:

Be it known that I, JOHN J. TRAINOR, of the city and county of New York, in the State of New York, have invented a new and useful Improvement in Cableways, of which the following is a specification.

My invention relates to an improvement in cableways, in which provision is made for dumping the tub at any desired point throughout the limit of its travel by manipulating the hoisting-rope.

A practical embodiment of my invention is represented in the accompanying drawings, in which—

Figure 1 represents a cableway in side elevation showing the position of the parts when the tub is being elevated toward the carriage for the purpose of being conveyed away. Fig. 2 is a similar view showing the position of the parts when the tub is being dumped, and Fig. 3 is a view in detail showing a different arrangement of the hoisting-rope.

The cable on which the load is carried from point to point is denoted by A and is commonly supported by struts B B' located on some suitable firm foundation at or beyond the extreme points between which the load is to be carried, and has its ends anchored—as, for example, at a a'. The carriage, which is mounted to travel along the cable, consists of a frame C having journaled therein a pair of supporting-wheels c c' and carrying a pair of loose pulleys c² c³ for guiding the hoisting-rope. The struts B B' also have mounted at or near their upper ends guide-pulleys b b' b² b³ for guiding the carriage-operating rope to and from the hoisting-engine.

The hoisting-engine is represented conventionally at D and is provided with carriage operating and hoisting drums d d'. For purposes which will hereinafter appear the drums d d' are made of the same size. The carriage-actuating rope (denoted by E) leads from the drum d, one part extending over the guide-pulley b' to one end of the carriage C and the other part extending over the guide-pulley b, thence to the guide-pulley b² at the opposite strut B', thence around the guide-pulley b³ and back to the opposite end of the carriage C.

The hoisting-rope E' extends from the drum d' over a guide-pulley b⁴ at the strut B, thence to the guide-pulley c² on the carriage, thence

around the pulley f mounted in a block F from which the tub G is hung, thence up to the guide-pulley c³ on the carriage, around it and down to a guide f' in the block F and thence to one edge of the tub G, to which it is secured; or the hoisting-rope may extend directly from the guide-pulley c³ on the carriage to the edge of the tub, as shown in Fig. 3. The point to which the hoisting-rope is secured is denoted by g.

The tub is so balanced that it will retain its horizontal position so long as the movable block F is free to be elevated, but when it is interrupted by contact with the carriage C the strain upon the hoisting-rope will be exerted upon the edge of the tub at g and the tub itself will be tilted and its load dumped, as shown in Fig. 2.

The operation is as follows: When the tub is loaded, the engine is made to operate the hoisting-drum d' until the load has been elevated to a point near the carriage or to a point sufficiently high for its transportation. The drums d and d' are then simultaneously operated, the drum d being operated in the one direction or the other to convey the load in one direction or the other along the cable, as may be desired. At the same time the drum d is operated the drum d' will be operated in the opposite direction, and the two drums being of the same size the hoisting-drum will take in or pay out the hoisting-rope just as fast as the carriage travels along the cable, so that the load will be retained at the same height. When the load reaches a point where it is desired to discharge it the drum d is stopped and the hoisting-drum d' continued in motion and the movable block F brought into engagement with the carriage. As soon as it can no longer travel upwardly, the strain upon the hoisting-rope takes effect upon the edge of the tub and the latter is tilted to discharge its load. When this is done the hoisting-drum is reversed to slacken the hoisting-rope and permit the tub to come back to its horizontal position, and having been returned to the point where it is to receive its load it may be lowered.

Where it is desired to exchange an empty tub for a loaded one, it requires simply that the end of the hoisting-rope shall be attached to the edge of the loaded tub at the time of attaching the tub to the movable block F, and

this may be done by a removable fastening of any well-known or approved form.

What I claim is—

1. A tub suspended in position to be tilted,
5 a hoisting rope for elevating the tub and means for actuating the hoisting rope, the said hoisting rope being attached directly to the tub at one side of its center of gravity whereby the hoisting strain may be imparted to the side of
10 the tub to tilt it at a predetermined point of elevation, substantially as set forth.

2. The combination with a cable suitably supported a carriage mounted to travel along

the cable and means for operating the carriage, of a hoisting rope suspended from the
15 carriage, a movable block suspended from the hoisting rope, a tub suspended from the movable block and means for actuating the hoisting rope, the end of the hoisting rope being extended through the movable block and
20 attached to the tub at one side of its center of gravity, substantially as set forth.

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Witnesses:

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