

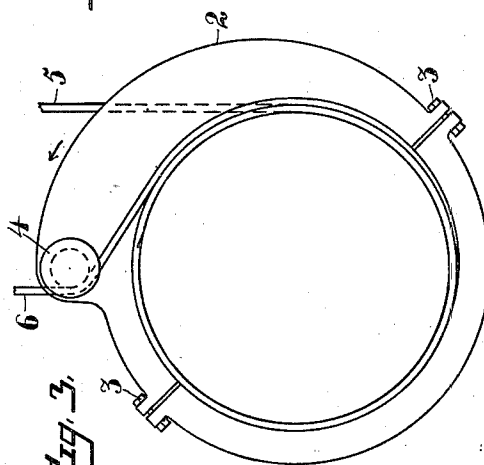
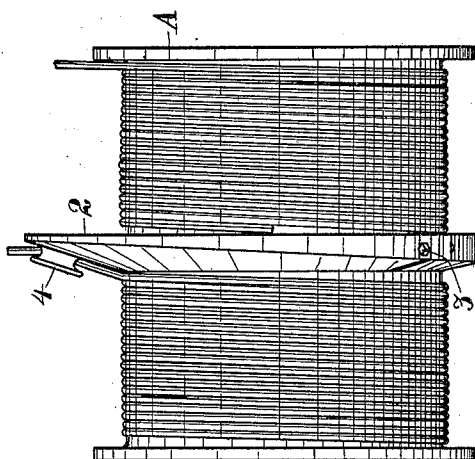
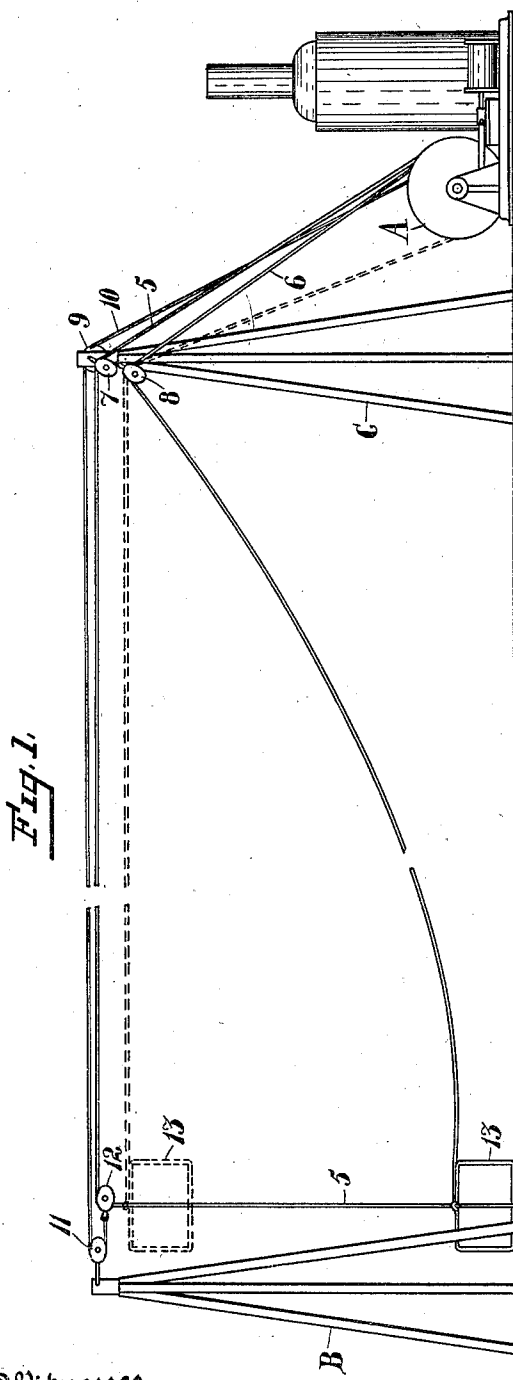
No. 747,113.

PATENTED DEC. 15, 1903.

C. J. ALLEN.
HOISTING AND CONVEYING APPARATUS.

APPLICATION FILED JULY 1, 1903.

NO MODEL.



Witnesses,
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UNITED STATES PATENT OFFICE.

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HOISTING AND CONVEYING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 747,113, dated December 15, 1903.

Application filed July 1, 1903. Serial No. 163,847. (No model.)

To all whom it may concern:

Be it known that I, CHARLES J. ALLEN, a citizen of the United States, residing in the city and county of San Francisco, State of California, have invented an Improvement in Hoisting and Conveying Apparatus; and I hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to improvements in cable conveyers and in hoists for the same.

Often it is desired to transfer burdens from one point to another over a short intervening space—as, for example, the cargo of a ship which is to be removed from the hold to the wharf alongside which the vessel may be lying or, vice versa, from the wharf to the ship. The ordinary cableway equipments require special driving and hoisting mechanism and special tackle which render them unavailable or unsuitable in many instances where a cable conveyer, if easily rigged up, could be used to advantage.

It is the object of my invention to adapt an ordinary single-drum hoist to operate a cableway whereby the load is hoisted and conveyed without the use of the ordinary standing cables.

The invention consists in the parts and the construction and combination of parts having reference to the accompanying drawings, in which—

Figure 1 is an elevation of the hoist and conveying mechanism. Fig. 2 is a plan of the drum with rewind attachment in place. Fig. 3 is a side view of the rewind attachment.

A represents the drum of an ordinary hoist driven from any suitable source of power.

2 is a separable ring adapted to embrace the drum and to be locked rigidly thereon by suitable means, as the bolts and nuts 3, which are disposed in the plane of the ring, so as to offer no projecting points for the ropes which are wound on the drum to be engaged by accident. One side of the ring is beveled, and at a suitable point on this beveled surface is formed a grooved projection or button 4. The ring 2 is preferably disposed centrally of the drum and divides the winding-surface of the drum into two equal sections, making the one drum the equivalent of two. A rope or cable

5 is secured at one end to one section of the drum, and a similar rope or cable 6 of approximately the same length as rope 5 is secured to the other section. The ropes 5 and 6 are ordinarily wound the same way upon the drum.

B and C represent two towers or equivalent supporting means disposed relative to the points of loading and deposit. Tower C or that adjacent to the hoist has two sheaves 7 8, corresponding, respectively, to ropes 5 6, and a third sheave 9, over which a fall-line 10 passes. The fall-line is operable independently of the hoist. The end of the fall-line passes over a sheave 11 in tower B and attaches to a block 12, through which the hoisting-rope 5 is rove.

In operation the end of rope 5 is attached to a burden, as 13, which is to be transferred from one point to another between the towers B and C. Rope 6, which normally hangs slack from sheave 8, is also attached to the burden. The drum is then revolved to wind up both ropes and to lift the burden to the proper elevation. A bight is then taken in rope 6 over button 4 and the drum reversed. This causes rope 5 to pay out while rope 6 continues to be wound up, the burden thereupon being supported on both ropes and made to traverse the space between the towers. Having moved the burden the proper distance, it is lowered by slackening the fall-line 10. After the burden is deposited the fall-line is rewound to bring the hoisting-block 12 back to its normal position near the outer tower and the line made fast. The drum is then revolved to pay out rope 6 and wind up rope 5. At the proper moment rope 6 is detached from button 4, the drum again reversed to pay out both ropes, and the operation of hoisting and transporting burdens is repeated.

Preferably the button 4 is disposed within the planes of the two walls of ring 2, so as not to offer a projection to be accidentally engaged by the rope in case several layers may be wound thereon. The button should be so situated as only to be engaged by rope 6 through some positive external agency.

This conveying apparatus is simple of ar-

rangement and any drum is suited for the purpose, since it is not intended for use where the distance to be traversed is very great.

Under some circumstances, where the landing-place is on the same level practically as the drum, tower C and the fall-rope may both be dispensed with.

It is obvious that burdens may be transported in either direction over the traversable space.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The combination in a conveying apparatus of a drum-hoist, an outer, supported sheave, hoisting and haul ropes operated by said hoist, one of said ropes passing through said sheave, the other rope connecting with the first rope below said sheave, said ropes normally winding up or unwinding together, and means by which the winding or unwinding of one of said ropes may be reversed with relation to the direction of movement of the other.
2. The combination in a conveying apparatus, of a drum-hoist, an outer supported sheave, a rope connected with said hoist and passing through said sheave, a second rope from said hoist normally winding in the same direction and simultaneously with the first rope and connecting with the first rope at a

point below said outer sheave, and means by which the direction of travel of said ropes may be reversed relative to each other.

3. The combination in a conveying apparatus of a hoisting-drum, two ropes attached to said drum and normally wound thereon in the same direction, an outer sheave through which the end of one of said ropes passes, said second rope connected to the first rope at a point below said sheave, and a part rigid with the drum around which a bight may be taken by one of said ropes to cause the ropes to wind oppositely on the drum.

4. The combination with a drum, of a detachable annulus, means for securing said annulus rigidly on said drum, a rope attached to the drum, and a part rigid with the annulus and projecting from the face thereof and interposable in the path of said rope.

5. The combination with a drum of a separable ring attached rigidly to and centrally of the drum, a rope attached to the drum, said ring having a bevel-surface, and a protuberant part on said surface interposable in the path of said rope.

In witness whereof I have hereunto set my hand.

CHARLES J. ALLEN.

Witnesses:

S. H. NOURSE,
JESSIE C. BRODIE.