

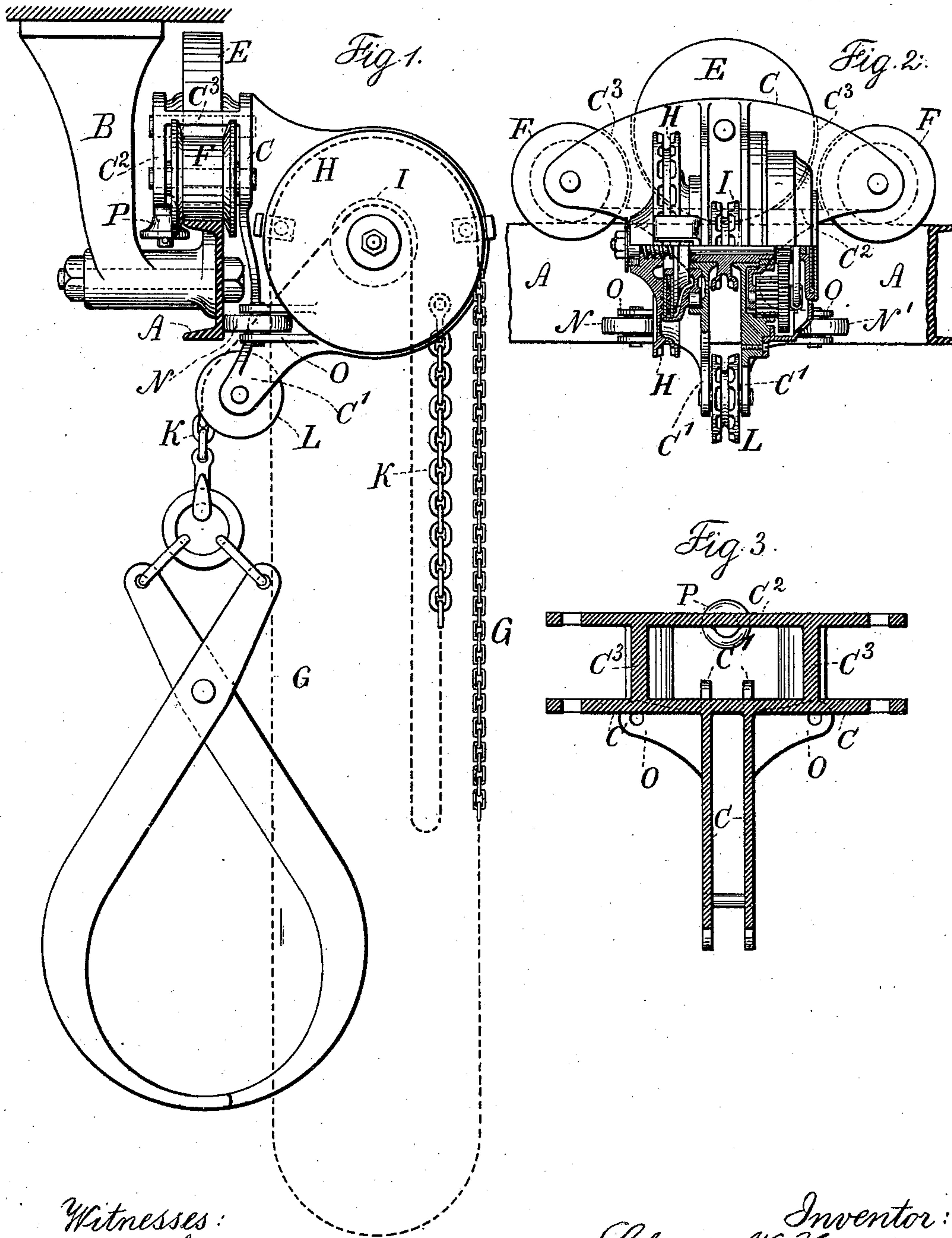
(No Model.)

C. W. HUNT.

OVERHEAD TROLLEY FOR HOISTING APPARATUS.

No. 581,119.

Patented Apr. 20, 1897.



Witnesses:
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UNITED STATES PATENT OFFICE.

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OVERHEAD TROLLEY FOR HOISTING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 581,119, dated April 20, 1897.

Application filed January 6, 1897. Serial No. 618,124. (No model.)

To all whom it may concern:

Be it known that I, CHARLES W. HUNT, a citizen of the United States, residing at West New Brighton, in the county of Richmond and State of New York, have invented an Improvement in Overhead Trolleys for Hoisting Apparatus, of which the following is a specification.

In Letters Patent No. 538,610, granted to me April 30, 1895, an overhead trolley is represented in which the frame carrying the article to be moved is supported on three wheels, the central one being slightly larger and having a cylindrical periphery and the end ones having guide-flanges and resting lightly upon the track, the principal weight being carried by the central wheel; and in Letters Patent No. 413,004, granted October 15, 1889, a triplex hoisting mechanism is made use of.

I have found it difficult to apply chain blocks or hoists to overhead trolley mechanism, because in many places there is not sufficient head-room for the chain-blocks to be suspended below the trolley, and in efforts to combine with the trolley a chain hoist or block the weight of the article suspended has tended to bind the wheels of the overhead trolley against the track in such a way as to prevent the easy movement of the trolley after the article has been suspended.

The object of the present invention is to combine a chain-hoist with a trolley in such a manner as to occupy but little space vertically and so that the weight is suspended directly below the supporting-wheels, so that little or no lateral strain comes upon the wheels or the trolley.

In carrying out this invention I apply the differential or other hoisting pulleys directly upon the frame of the trolley at one side of the hoisting-wheels and place a guide-sheave in the trolley-frame, so that the chain or rope passing over the same is directly beneath the track and the supporting-wheels, whereby the weight can be raised as high as possible, and it will hang directly beneath the supporting-wheels, and hence can be moved from place to place with the trolley and without undue lateral strain upon the wheels or frame of the trolley, and the actuating differential or endless chain of the hoisting mechanism is upon

the frame of the trolley and at one side of the track.

In the drawings, Figure 1 is a section of the elevated track and an elevation of the trolley mechanism. Fig. 2 is a side view, partially in section, illustrating the differential or power hoist and the trolley-frame and track; and Fig. 3 is a sectional plan of the truck-frame without the supporting-wheels.

The track A is of any desired character. I have represented the same as a flanged rail bolted to the pendent bracket B. This bracket may be of any ordinary character, and it is connected with a ceiling, wall, or other support. The central wheel E is cylindrical and the end wheels F are flanged to act as guides-wheels upon the track, and the frame C is preferably constructed so that the principal weight is taken by the central wheel E upon the track and but little weight comes upon the end wheels F, such wheels acting principally as guide-wheels and keeping the wheel E upon the track.

The frame C is extended out laterally to receive a triplex or differential hoist of any desired character, the devices represented being generally similar to those shown in Patent No. 413,004 and do not require further description, it being understood that the chain G is endless and passes over the chain-wheel H, and this in turn acts upon gearing to give to the chain-wheel I a slow but powerful movement, and in so doing the chain K is drawn up to raise the weight, and this chain K instead of hanging vertical, as usual, is passed over the guide-sheave L to the article to be raised, and this guide-sheave is supported by the bracket-arms C', extending down from the frame C below the track A, and the position of the parts is such that the chain K in passing up to the guide-sheave L is directly below the track A and the supporting-wheel E. Hence there is not any lateral strain upon the track or little or no tendency to bind the guide-wheels F or to cause undue friction between them and the track, and it is simply necessary to make the frame C and bracket-arms C' sufficiently strong to resist the strain of the chain as it passes around the guide-sheave and the chain-wheel I.

When the endless chain G is being acted

upon, there is a tendency to draw the frame C down and cause the wheels F to bind or the frame C to press against the side of the track A. For this reason the rolls N N' are provided in jaws O, that project from the frame C, and these rolls N N' are near the bottom of the track-bar A and against the outer side thereof, so that these rolls prevent friction against the side of the track while the chain G is being acted upon.

I do not limit myself to any particular character of triplex or differential hoist mounted upon the frame of the overhead trolley, as these may vary according to circumstances.

I have represented two rollers N N' as at opposite sides of the jaws holding the guide-sheave L. It, however, is not necessary to use both of these rolls, as one roll, N', is usually sufficient.

In Figs. 1 and 3 I have represented a guide-roll P upon a vertical pivot extending down from the frame C², such roll having a flange upon it passing under the top flange of the track at the back, the object being to prevent the trolley from jumping off the track when there is not any load upon it and when it may be moved suddenly from one place to another. The same object can be accomplished by a finger extending down from the frame and shaped similar to the roll to pass in under the top flange of the track, such finger or roll not touching the track in the normal position of the trolley.

I have found it advantageous to cast the frame C and the back frame C² with connecting flanges or webs C³, that extend down between the respective wheels, as indicated by dotted lines in Fig. 2, in order that the back frame C² may take its proper share of weight in supporting the pivots of the wheels E and F.

I claim as my invention—

1. The combination with a differential or power hoist and overhead trolley-wheels and frame and elevated track, of a guide-sheave supported in the frame of the trolley and over which the hoisting chain or rope passes, such guide-sheave being below the track and with one edge in line with the supporting-wheels of the trolley, so that the weight suspended by the trolley hangs directly below the supporting-wheels of such trolley, and a roll supported on the frame at the side of the track near its lower edge, substantially as set forth.

2. The overhead track in combination with the trolley-frame, central wheel and end guide-wheels upon the track, and a guide-sheave supported in brackets extending down from the frame and a hoisting-chain passing over such guide-sheave, a chain-wheel for the hoisting-chain, an endless chain and chain-wheel acted upon by the same and gearing intervening between the chain-wheel for the hoisting-chain and the chain-wheel for the endless chain for giving motion to the former, substantially as set forth.

3. The overhead track in combination with the trolley-frame, central wheel and end guide-wheels upon the track, a guide-sheave supported with one edge below the track, a chain passing over the said guide-sheave to the weight to be raised, chain-wheels for acting upon such chain and a guide extending down from the bottom and beneath the track at the back upper edge, substantially as set forth.

Signed by me this 30th day of December, 1896.

CLAS. W. HUNT.

Witnesses:

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