W. VAN WIE.

RADIUS COUNTERBALANCE CRANE.

APPLICATION FILED APR. 28, 1908.

912,335. Patented Feb. 16, 1909.

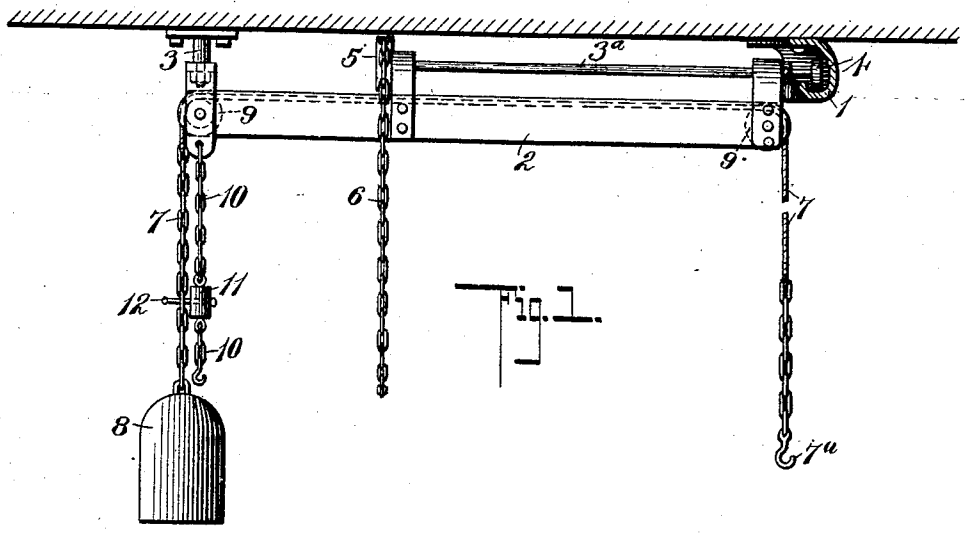


Fig. 1.

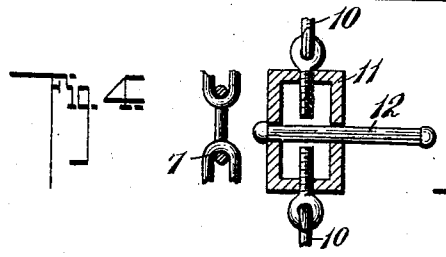


Fig. 4.

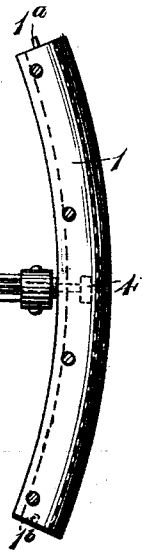
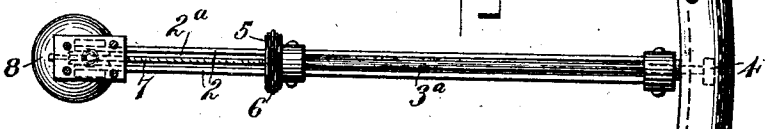


Fig. 2.



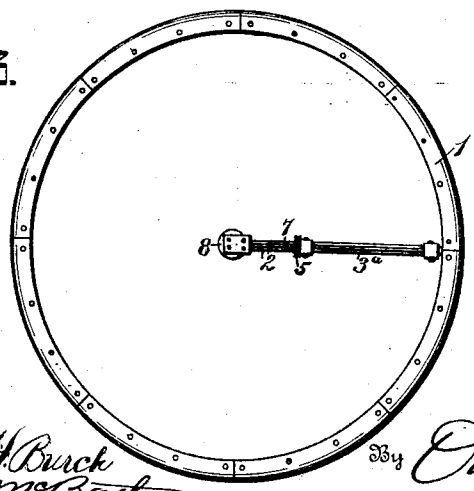


Fig. 3.

Witnesses

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RADIUS COUNTERBALANCE-CRANE.

No. 912,335. Specification of Letters Patent. Patented Feb. 16, 1909.

Application filed April 28, 1908. Serial No. 429,699.

To all whom it may concern:

Be it known that I, WALTER VAN WIE, a citizen of the United States, residing at Oakland, in the county of Alameda and State of California, have invented a new and useful Improvement in Radius Counterbalance-Cranes, of which the following is a specification.

This invention relates to a counter balance crane designed to swing along a circular trackway as well as to have a vertical movement, thus giving the crane a larger radius of action than is to be had with cranes having only a vertical movement, or provided with a very limited swinging movement.

The invention consists in the novel features of construction hereinafter described, pointed out in the claims and shown in the accompanying drawings, in which—

Figure 1 is a side elevation of my device, a trackway being shown in section. Fig. 2 is a plan view. Fig. 3 is a plan view of a circular trackway. Fig. 4 is a detail sectional view illustrating a construction of turn buckle.

In these drawings 1 represents a semi-circular track section formed of a strip of metal curved longitudinally and bent transversely into an irregular semi-cylindrical shape so as to form a flanged trackway upon its under side and an overhanging upper portion through which bolts may be placed to secure the trackway to a ceiling. End portions of these sections are provided, respectively, with pins 1^a and sockets 1^b so that a number of sections may be fitted together, and the complete track may describe a circle or any portion thereof, according to the number of sections employed. A beam 2 is pivotally suspended from a depending pivot pin 3 and is adapted to swing in a circle parallel to the ceiling, the pivotal point of the beam being in the center of the curved track and the beam being a radius of the track. A shaft 3^a is mounted upon said beam and is provided at one end with a wheel 4 which travels upon the track and at the opposite end with a pulley 5 over which runs an operating chain 6, and by drawing upon said chain the pulley 5 may be operated in either direction, thus rotating the shaft 3^a and the wheel 4 and causing the beam 2 to swing upon its pivot point as the wheel 4 travels upon the track 1. The upper face of the beam 2 is grooved as shown at 2^a and a cable 7 provided with a hook 7^a at one end and a counter balance weight at the other end, travels in said groove, running over pulleys 9 carried by end portions of the beam. A chain 10 has its upper end fixed to any suitable portion of the beam or its supports and is formed in two sections connected by a turn buckle 11, the sides of which are perforated and through said perforations slides a bar 12, shaped similar to the operating bars provided for the ordinary vise.

The operation of the crane is as follows:— When the operator desires to hoist work or any article it is necessary to transfer the weight of the counter balance weight 8 from the chain 10 which is hooked to the weight 8 and the cable 7, the hook 7^a of which is fastened to the work to be lifted. By means of the bar 12 the turn buckle 11 is turned so as to slightly lengthen the chain 10 in order that it may be unhooked from the weight 8. As this weight descends it will lift the work at the other end of the cable 7, and by pulling upon the chain 6 the beam 2 is swung along the track until the work is above the place where it is to be deposited, and may be locked in elevated position by engaging the chain 10 with the weight 8. When the hook 7^a is to be disengaged from the work the bar 12 can be turned so as to shorten the chain 10 thus relieving the cable 7 of pull from the weight 8, so that the hook 7^a can be readily disengaged from the work.

It will be obvious that the beam 2 may be of any desired length, and the track sections 1 may be formed in as many sections and may have as great a length as desired.

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

1. A device of the kind described comprising a beam mounted to swing in a circle, said beam being longitudinally grooved, idle pulleys carried by the beam, a cable running over said pulleys and traveling in the groove, a counter balance weight carried by one end of the cable, a chain fixed at its upper end adjacent the pivotal point of the beam and adapted to engage the weight, a semi-circular trackway, means carried by the beam traveling upon said trackway, and means for moving the beam along the trackway.

2. A device of the kind described comprising a semi-circular trackway, a beam supported at one end by said trackway, and pivotally mounted at its other end to swing in a circle, the pivotal point of the beam be-

ing the center of the trackway, a cable running longitudinally over said beam, a counterbalance weight carried by one end of the cable, a chain fixed at its upper end at a point adjacent the pivotal point of the beam, and adapted to engage said counter balance weight, a turn buckle forming a portion of said last mentioned chain, and an operating bar sliding freely and transversely through said turn buckle.

3. A device of the kind described comprising a track formed of curved sections of metal strips, said strips being bent semi-cylindrical thereby forming a circular trackway and an overhead portion adapted to be secured to a ceiling, a beam pivotally mounted to swing in a circle parallel to the ceiling, a shaft rotatably mounted upon said beam, a wheel carried by said shaft and running in the trackway, a pulley fixed upon said shaft, a chain running over said pulley, a cable running longitudinally over the beam, a counter balance weight carried by one end of the cable, and means for relieving said cable of the counter balance weight.

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Witnesses:
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