W. VAN WIE.

COUNTERBALANCE HOIST WITH ADJUSTABLE COUNTERWEIGHT.

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909,970. Patented Jan. 19, 1909.

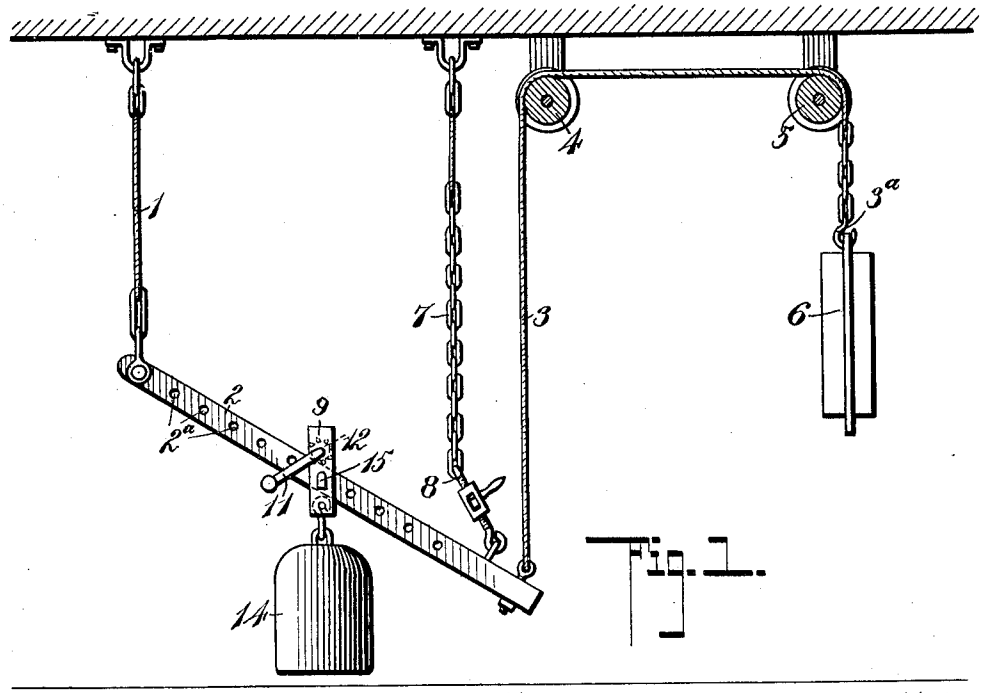


Fig. 1.

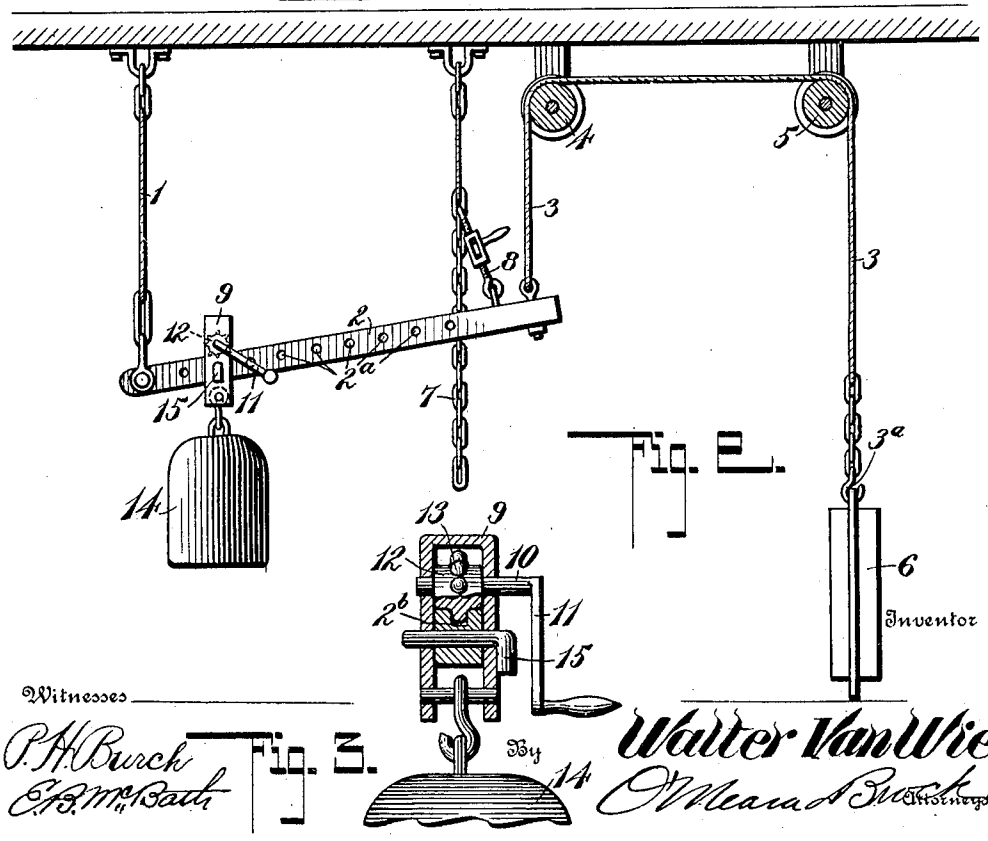


Fig. 2.

Fig. 3.

Witnesses

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WALTER VAN WIE, OF EAST OAKLAND, CALIFORNIA.

COUNTERBALANCE-HOIST WITH ADJUSTABLE COUNTERWEIGHT.

No. 909,970. Specification of Letters Patent. Patented Jan. 19, 1909.

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To all whom it may concern:

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

This invention relates to a hoisting device and the object of the invention is a device of the kind provided with a shifting counterbalance together with means for sliding the said weight along a lever.

The invention consists of 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 the device. Fig. 2 is a similar view showing the parts in a different position. Fig. 3 is a transverse section taken through the lever and showing in section a traveling carriage supporting the counter-weight.

In these drawings 1 represents a depending cable which supports one end of a lever or vertically swinging beam 2. To the adjacent end portion of the beam is connected a cable 3 which runs over pulleys 4 and 5 and supports the work which is to be lifted to a table, bench, or machine bed. It will be obvious that the weight of the work will tend to elevate the end of the beam 2 to which the cable 3 is secured. This end can be supported at any desired height by a cable 7 which is engaged by a hook 8 carried also by the vertically swinging end portion of the beam. This hook is in the form of a turn-buckle to allow for more careful adjustment of the beam. The beam 2 is provided with a plurality of transverse openings 2^a and upon its upper face it is provided with a plurality of recesses 2^b. A traveling carriage 9 is U-shaped in form and journaled in the bow portion of said carriage is a shaft 10 having a handle 11 and carrying a roller 12 having projecting knobs 13 which fit into the recesses 2^b. The side members of the carriage 9 fit over the sides of the beam 2 and extend below the same. A weight 14 is supported by this carriage and a locking pin 15 passes through the side members of the carriage and through the perforations 2^a and lock the weight 14 against sliding movement along the beam.

It will be obvious that by withdrawing the pin 15 and turning the handle 11 the carriage 9 will be moved along the beam toward or away from its fulcrum point according to the direction of rotation of the handle, this causing the weight 14 to balance or overbalance the work, or to cause the work to overbalance the weight 14, as may be at the time required. When the parts are in the position shown in Fig. 1 the work can be swung to the bench, table or other support and the hook 3^a detached. When finished it can be lowered to the floor, the hook 8 engaged with the upper end of the cable 7 and the hook 3^a detached.

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 vertically swinging beam, said beam having a plurality of transverse openings and a plurality of recesses upon its upper face, a carriage, a roller carried by the carriage said roller having knobs engaging the recesses of the beam, a locking pin adapted to pass through the carriage and the openings of the beam, a weight supported by the carriage, pulleys, and a cable running over said pulleys and secured at one end to the beam.

2. A device of the kind described comprising a beam, a cable supporting one end of the beam at a fixed height, a cable connected to the opposite end portion of the beam said cable running over pulleys, a hook fixed to the free end of said cable, a carriage traveling along the beam, means for locking the carriage to the beam, a weight supported by the carriage, and means for supporting the free end portion of the beam at its adjusted height.

3. A device of the kind described comprising a pivotally suspended beam having recesses upon its upper face, a U-shaped carriage the side members of which overlap the sides of the beam, a shaft journaled in the bow portion of said carriage, a roller on the shaft traveling upon the beam, knobs upon the roller engaging the recesses of the beam, a handle on the shaft, and a weight supported from said carriage.

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Witnesses:
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