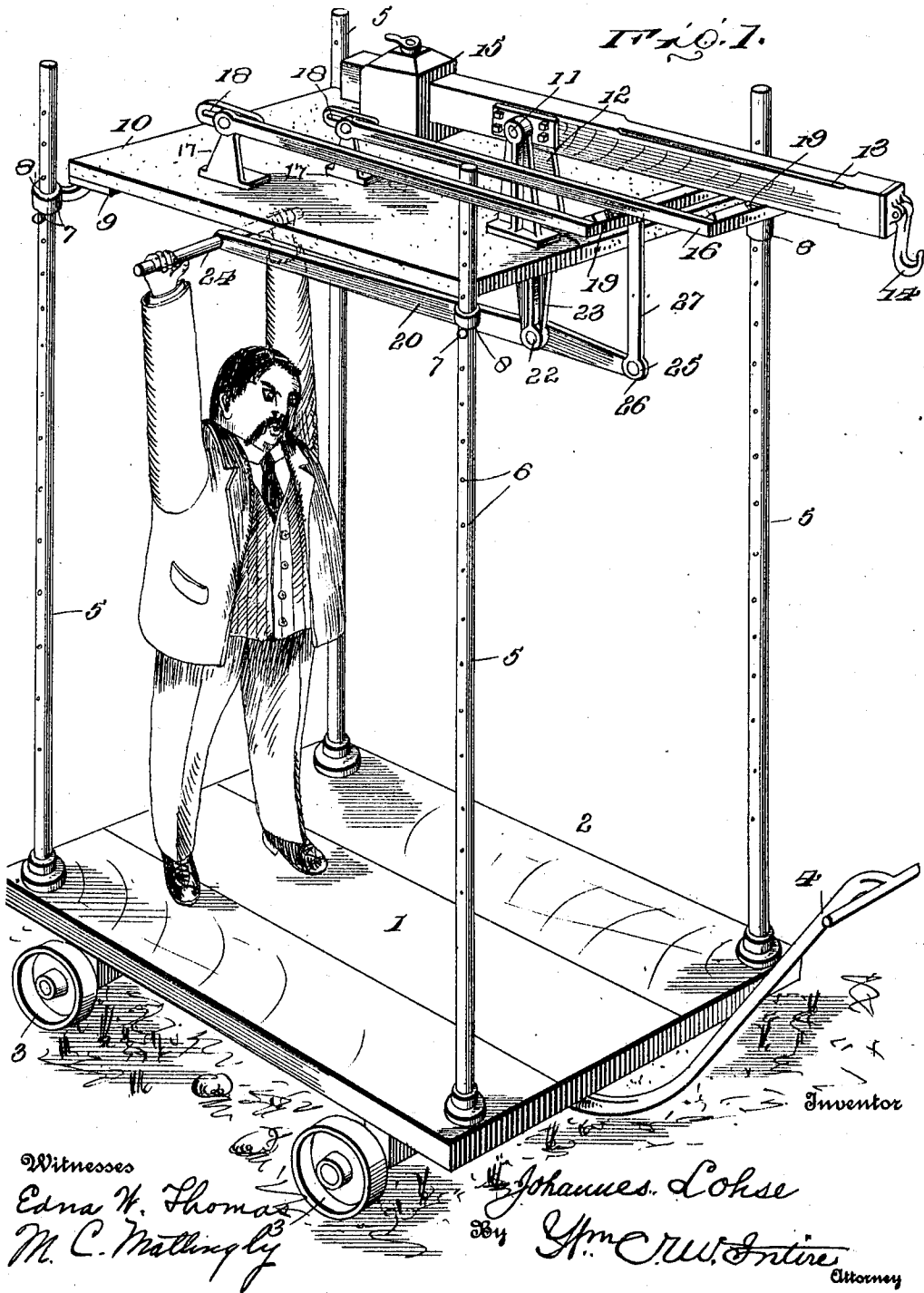


J. LOHSE.
LIFTING MACHINE.
APPLICATION FILED NOV. 11, 1910.

1,004,048.

Patented Sept. 26, 1911.

2 SHEETS—SHEET 1.

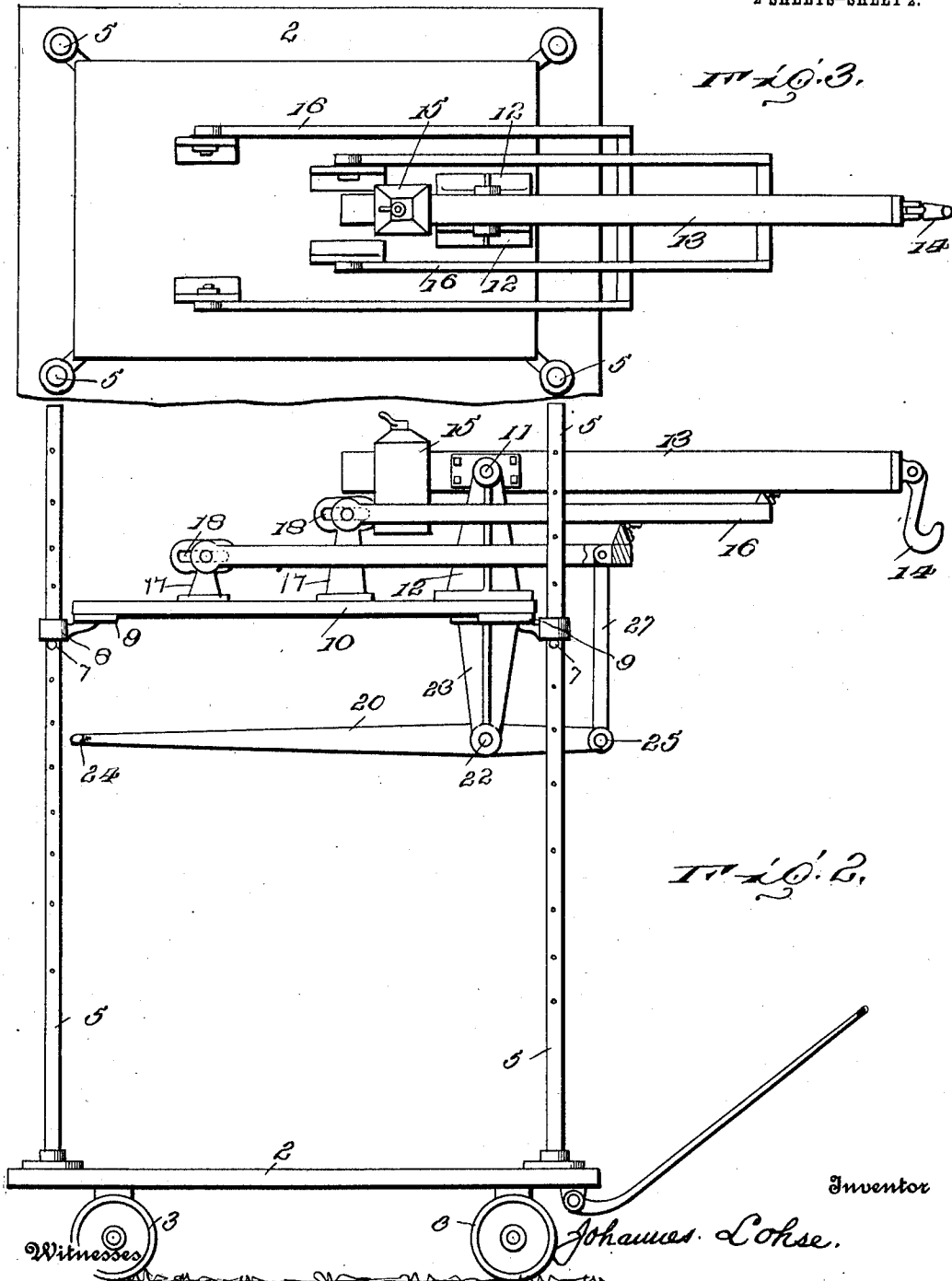


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Witnesses

Edna W. Thomas.
M. C. Mattingly.

Johannes Lohse.
By Jm O W Entire

Inventor
Attorney

UNITED STATES PATENT OFFICE.

JOHANNES LOHSE, OF ALVA, OKLAHOMA.

LIFTING-MACHINE.

1,004,048.

Specification of Letters Patent.

Patented Sept. 26, 1911.

Application filed November 11, 1910. Serial No. 591,915.

To all whom it may concern:

Be it known that I, JOHANNES LOHSE, a subject of Germany, residing at Alva, in the county of Woods and State of Oklahoma, have invented certain new and useful Improvements in Lifting-Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to new and useful improvements in lifting devices, and more particularly to that class most generally known under the title of derricks.

An object of this invention is the provision of a device of this character which can be transported from place to place and readily operated by a single person, for the purpose of lifting weights with little or no exertion upon the part of the operator.

An object of this invention is to improve and simplify devices of this character, rendering them comparatively simple and inexpensive to manufacture, reliable and efficient in use and readily operated.

With the above and other objects in view, this invention resides in the novel features of construction, formations, combinations and arrangements of parts to be hereinafter more particularly, described, claimed and illustrated in the accompanying drawing, in which—

Figure 1 is a perspective view of my improved derrick; Fig. 2 is a top plan view thereof, and Fig. 3 is a side elevation.

Referring to the drawings by characters of reference, the numeral 1 designates generally a truck, comprising a substantially rectangular platform or body portion 2, supported by suitable wheels 3, and having secured to its forward end a suitable handle 4, by the means of which the truck may be transported from place to place as desired.

Vertical uprights 5 are secured by any suitable means to the opposite corners of the body portion 2 of the truck, and are provided with apertures 6, for the reception of pins 7, adapted to contact with the lower edges of slidable collars 8, carried by the outer extremities or brackets 9, which are bolted or otherwise secured to a substantially rectangular frame or platform 10, upon the upper face of which is pivoted, as indicated by the numeral 11, in suitable standards 12, a derrick arm 13, to the outer end of which

is secured a hook 14, while the inner end of the said derrick arm carries slidably mounted thereon an adjustable weight 15, which is adapted to counter-balance the weight of the arm to be lifted. This platform 10 may be adjusted with respect to the standards 5, for the purpose of raising the lever 20 to suit the height of the operator.

Substantially U-shaped members 16 are pivoted at their opposite ends in vertical standards 17, each of which is provided with a slot 18, through which the pivot extends, to allow for any necessary play. These U-shaped members are of substantially the same length as the distance between the pivotal point of the derrick arm and the outer end thereof, while the intermediate portions thereof extend across the said derrick arm at points thereon obtained by dividing the same into equal portions according to the number of U-shaped members which are used. The end of the U-shaped member which is nearest the terminal of the derrick arm supporting the hook is beveled in opposite directions to prevent any binding against the said arm when the U-shaped member is lifted and secured to this before-mentioned derrick arm by a hinge 19, or any other desired means which will answer the same purpose, while the next preceding U-shaped member is hinged to the opposite legs of the above U-shaped member, and so on, as is clearly illustrated in the accompanying drawings. These U-shaped members 16, by their peculiar formation and connection with each other and with the derrick arm 13 serve to materially assist in lifting any weight which is attached to the hook 14, on account of the over-balancing at their hinged connections.

A lever 20 is fulcrumed, as at 22, in a depending bracket 23, secured to the lower face of the movable platform 10, and has formed upon one end thereof a suitable handle 24, whereby the said lever 20 may be raised or lowered, while its opposite end is formed into an eye 25, for the reception of a pin 26, for the purpose of securing the said lever to an upwardly extending link 27, which is pivoted at its opposite end to the lower one of the U-shaped lifting members 16.

From the foregoing disclosure it will be manifest that a derrick is provided which will fulfil all of the necessary requirements of such a device.

In the drawings two U-shaped supporting members are shown, but it is to be understood that the invention is not to be limited to the use of two alone, but the number may be multiplied indefinitely as may be desired.

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

1. In a derrick the combination of a truck, a horizontally disposed platform vertically slidable thereon, a derrick arm pivoted to the platform, a lever pivoted on a horizontal axis to the said platform, and means for raising and lowering the derrick coöperative with the raising and lowering of the lever.

2. In a derrick, the combination with a truck, a horizontally disposed platform vertically adjustable thereon, a derrick arm pivoted upon the said platform, a lever pivoted upon the said platform on a horizontal axis, U-shaped lifting members mounted upon a platform and pivoted to the said derrick arm, and a link connecting the lever to one of the U-shaped members for the purpose of lifting the derrick arm.

3. In a derrick, the combination with a truck, a horizontally disposed platform vertically adjustable thereon, a derrick arm pivoted upon said platform, a lever pivoted on a horizontal axis to the said horizontally disposed platform, U-shaped members pivoted upon the platform, and hingedly connected to each other and to the derrick arm, and a link connecting one of the U-shaped members to the lever, for the purpose of lifting the derrick arm.

4. In a derrick, the combination with a truck, a horizontally disposed platform vertically adjustable thereon, a derrick arm pivotally mounted upon the said platform, a lever pivoted on a horizontal axis to the said platform, U-shaped members pivoted upon the platform and hingedly connected to each other and to the derrick arm, the intermediate portions of the said U-shaped members crossing the derrick arm at points upon the same located by dividing the said arm in substantially the same number of parts as there are U-shaped members, and a link connecting one of the U-shaped members to the lever for the purpose of lifting the derrick arm.

5. In a derrick, the combination with a truck, vertically extending uprights secured to the opposite corners of the truck, a horizontally disposed platform vertically ad-

justable upon said uprights, a derrick arm pivotally mounted upon the said platform, a lever pivoted on a horizontal axis beneath the said platform, U-shaped members pivoted upon the said platform, the said U-shaped members each being substantially the same length as the distance between the pivotal point of the derrick arm and the outer end of the same, and crossing the said derrick arm at points thereon located by dividing the derrick arm into portions substantially equal to the number of U-shaped members, and the upper of the said U-shaped members being hingedly secured to the derrick arm, while each preceding U-shaped member is hingedly secured to the next adjacent member and a link connecting one of the U-shaped members with the lever, substantially as and for the purposes hereinbefore described.

6. The combination in a derrick of a derrick arm, substantially U-shaped lifting members supporting the said derrick arm, of a lifting lever pivoted on a horizontal axis, and a link connecting the lifting lever with one of the U-shaped members for the purpose of lifting the derrick arm.

7. The combination in a derrick of a derrick arm, supporting means carried by one end thereof, a balancing weight secured to the opposite end thereof, U-shaped pivoted members hingedly secured to the derrick arm and to each other; of a lifting lever pivoted on a horizontal axis, and a link operatively connecting the lifting lever to the nearest U-shaped member for the purpose of lifting the derrick arm coöperative with the raising and lowering of the said lifting lever.

8. The combination in a derrick of a platform, a derrick arm pivoted thereon, standards carried by the platform, substantially U-shaped members pivoted in slots located in the said standards, the said U-shaped members being hingedly secured to the derrick arm and to each other, of a lifting lever and a link operatively connecting the said lifting lever to one of the U-shaped members, substantially as and for the purposes set forth.

In testimony whereof I affix my signature in presence of two witnesses.

JOHANNES LOHSE.

Witnesses:

MINNIE BEALL,
EDNA W. THOMAS.