

(No Model.)

2 Sheets—Sheet 1.

J. T. O'NEILL & J. A. CURRIE.
HOISTING APPARATUS.

No. 558,302.

Patented Apr. 14, 1896.

Fig. 1.

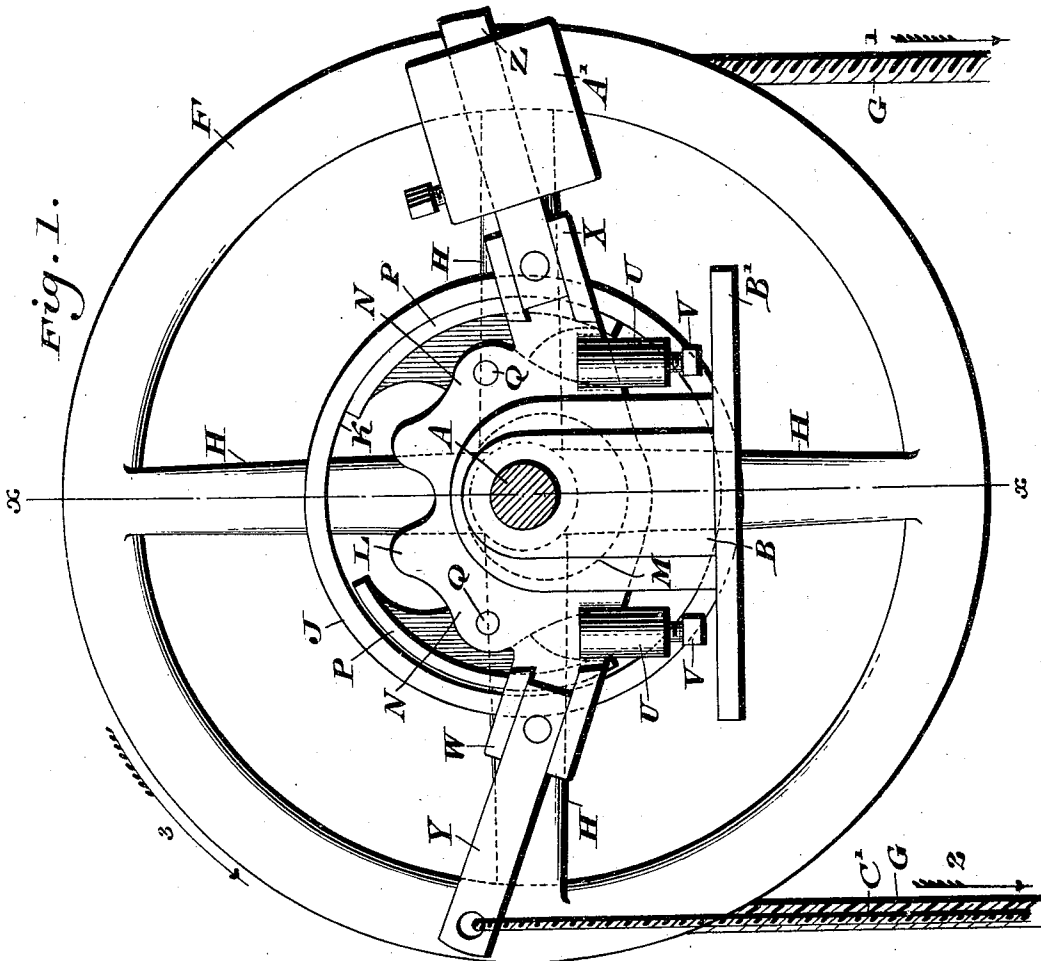
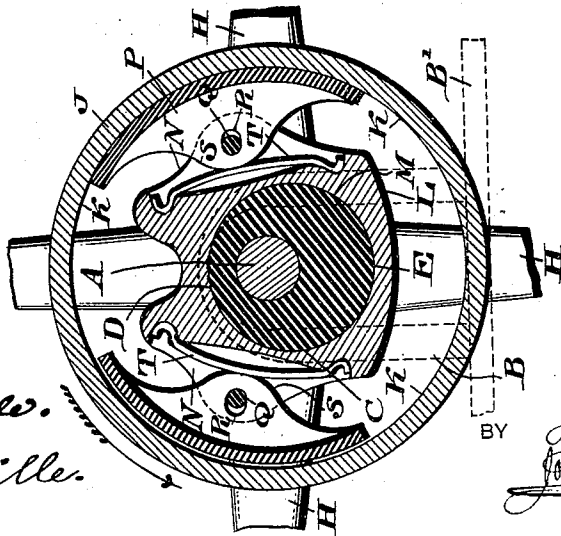


Fig. 3.



WITNESSES:

P. F. Chagw.
L. Douville.

INVENTORS

J. T. O'Neill.
J. A. Currie.
BY *John A. Edwards*
ATTORNEY.

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2 Sheets—Sheet 2.

J. T. O'NEILL & J. A. CURRIE. HOISTING APPARATUS.

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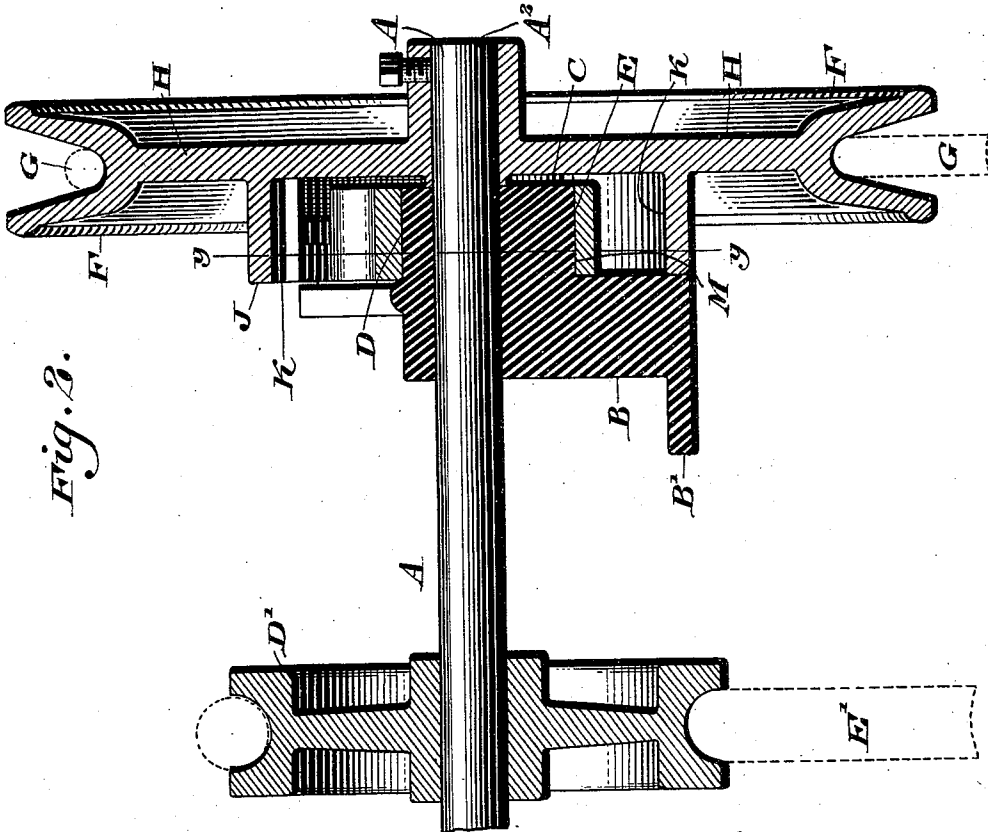


Fig. 2.

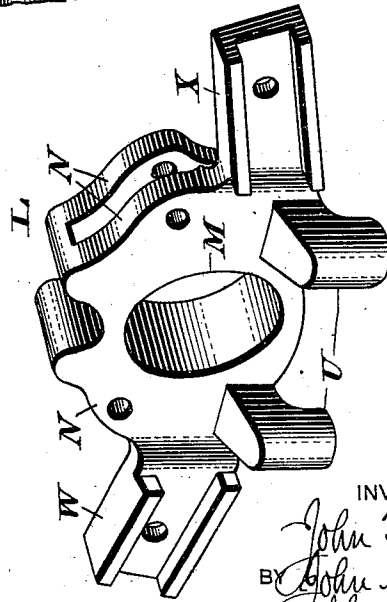


Fig. 4.

WITNESSES:

P. F. Angles.
L. Douville.

INVENTORS

John T. O'Neill
John A. Currie
John A. Currie

ATTORNEY.

UNITED STATES PATENT OFFICE.

JOHN T. O'NEILL AND JOHN A. CURRIE, OF PHILADELPHIA, PENNSYLVANIA.

HOISTING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 558,302, dated April 14, 1896.

Application filed October 5, 1895. Serial No. 564,728. (No model.)

To all whom it may concern:

Be it known that we, JOHN T. O'NEILL and JOHN A. CURRIE, citizens of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Hoisting Apparatus, which improvement is fully set forth in the following specification and accompanying drawings.

Our invention relates to hoisting apparatus; and it consists of a novel construction of fixture therefor, by means of which the load can be readily and effectively held at any desired point, provision being also made for enabling the attendant to check the descent of the load at any desired point without causing a sudden shock or jar to the carriage under any condition.

It further consists of novel details of construction, all as will be hereinafter set forth.

Figure 1 represents a side elevation of a hoisting apparatus embodying our invention. Fig. 2 represents a sectional view on line xx , Fig. 1. Fig. 3 represents a vertical section on line yy , Fig. 2. Fig. 4 represents a perspective view of a block or attachment employed, removed from its position seen in the other figures, to be hereinafter referred to.

Similar letters of reference indicate corresponding parts in the several figures.

Referring to the drawings, A designates the main shaft of the apparatus, which, it will be understood, is ordinarily located in the upper portion of the well or shaft in which the elevator-car, dumb-waiter, &c., is located. The said shaft has one end or portion thereof mounted in suitable bearings, while the other end, as A^2 , is mounted in the bearing B, which has a base B' and an offset C, it being noticed that said shaft A passes through the upper portion of said offset, whereby the outer surface or periphery of the latter is eccentric with respect to the center or axis of rotation of the shaft A, the upper portion D being the thin side of said eccentric, while the swell or thick portion E is at the lower or under side of said offset in the present instance, it being of course understood that said bearing B, with its offset C, is immovably mounted upon a suitable support.

F designates a pulley or sheave which is mounted upon the shaft A adjacent to said

offset C, as will be understood from Fig. 2, said pulley having a rope G passed therearound, the function of which will be herein-after explained. 55

L designates a block, which is shown in detail in Fig. 4, and which has an inner bore M, which is adapted to contact with the periphery of the offset C. 60

N designates ears or lugs, which are located oppositely to each other on said block L, in which ears are pivoted the shoes P on either side, each of said shoes having a curved face which is adapted to contact with the inner curved surface K of the cylinder or ring J, as will be evident from Figs. 1 and 3, said shoes being held in position by means of the pins Q, which pass through said ears N, and a slot R in each of said shoes, as is best seen in Fig. 3, whereby a certain amount of play is allowed to said shoes, as is evident. 65 70

S designates a curved portion or cam-face on said shoe P, which is adapted to be in contact with the spring T, whereby movement is always imparted to said shoes, and the same are caused to always assume the proper position relative to the surface K, and thus act at intervals as a brake, as will be understood from Fig. 3. 75 80

U designates bosses attached to the under portion of said block L on either side thereof, in which are secured the adjustable stops, consisting in the present instance of set-screws or bolts V, the heads of which are adapted to contact with the base B' of the bearing B, whereby the movement of said block L is limited and can be adjusted in either direction according to requirements. 85

W and X designate arms or ways attached to said block L and extending in either direction therefrom, said arm W having mounted therein the bar Y, to which the rope or other connection C' is attached, while the arm X has mounted therein the bar Z, upon which the weight A' is mounted, said weight being adjustably held thereupon by any suitable means. 90 95

D' designates a pulley mounted upon the shaft A at any suitable point, from which proper connections may be made to an elevator-car, dumb-waiter, hoist, or other device with which the above-described fixture is adapted to be employed. 100

The operation is as follows: The elevator-car, dumb-waiter, &c., which is supported in any suitable manner by its attachment to the connection E', which passes around the pulley D', as it ascends or descends causes corresponding rotation of the sheave or pulley F, to which the cylindrical ring J is attached. The weight of the load tends to turn the sheave F in the direction opposite to that indicated by the arrow 3 in Fig. 1. This tendency, however, is normally resisted by the right-hand brake-shoe P in Fig. 1, which is thrown into action by the weight A'. The brake-shoe P, however, does not resist the rotation of the shaft in the direction of the arrow 3—that is, in the direction in which said sheave is turned to raise the load. Consequently if at any time while the load is being raised by drawing down on the cord G in the direction of the arrow 2 the cord is released, the brake is immediately thrown into action so that the load cannot fall. When the parts are in the position seen in Fig. 1, in order to allow the said pulley to rotate in the direction indicated by the arrow 1, it will only be necessary to exert a downward pull on the rope C', whereby the right-hand shoe P will be removed from its contact with the adjacent face of the ring J, and the pulley F, shaft A, and pulley D' are free to rotate.

It will be evident from the foregoing that the weight A' or the connection C' may be mounted upon either side of the block L, and the load can be attached to whichever extremity of the connection E' it may be expedient, according to requirements, it being thus apparent that the load will be always held at any desired point, and any liability to damage is entirely obviated, the releasing of the brake being effected by a pull upon the rope or connection C'.

It is to be understood that only one of the brake-shoes P is operative with each adjustment. In Fig. 1 this shoe is the right-hand one. To make the left-hand shoe operative, the weight will be applied to the arm V and the cord C' to the arm Z.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. In a device of the character described,

a shaft eccentrically mounted in a suitable bearing, a ring mounted on said shaft, a block mounted on said bearing, and a shoe attached to said block and adapted to contact with said ring, substantially as described. 55

2. In a device of the character described, a rotatable shaft, with a pulley thereon, having a ring connected therewith, a block eccentrically mounted relative to said pulley and a shoe pivoted to said block bearing against said ring, and stops limiting the movement of said block, said parts being combined, substantially as described. 60

3. In a device of the character described, a shaft, a pulley mounted on said shaft, a ring attached to said pulley, a block eccentrically mounted with respect to said shaft, a shoe attached to said block and adapted to contact with said ring, and a spring for holding said shoe in position, substantially as described. 65 70

4. In a device of the character set forth, a rotatable shaft with a pulley mounted thereon, having the ring J on its side, a bearing for said shaft having the offset C with a periphery eccentric to the center of said shaft, a block mounted on said offset, a shoe pivotally secured to said block and bearing against said ring, a spring bearing against said shoe, a stop connected with said block and adapted to contact with said bearing, and a weight attached to said block, said parts being combined substantially as described. 75 80 85

5. In a device of the character described, a shaft having a pulley mounted thereon, a ring connected with said pulley, a bearing for said shaft, a block eccentrically mounted on said bearing relative to said shaft, a shoe pivotally mounted on said block, a spring holding said shoe in position, bosses on the side of said block, stops adjustable in said bosses, and an arm and a weight detachably connected with said block, said parts being combined substantially as described. 90 95

JOHN T. O'NEILL.
JOHN A. CURRIE.

Witnesses:

JOHN A. WIEDERSHEIM,
R. H. GRAESER.