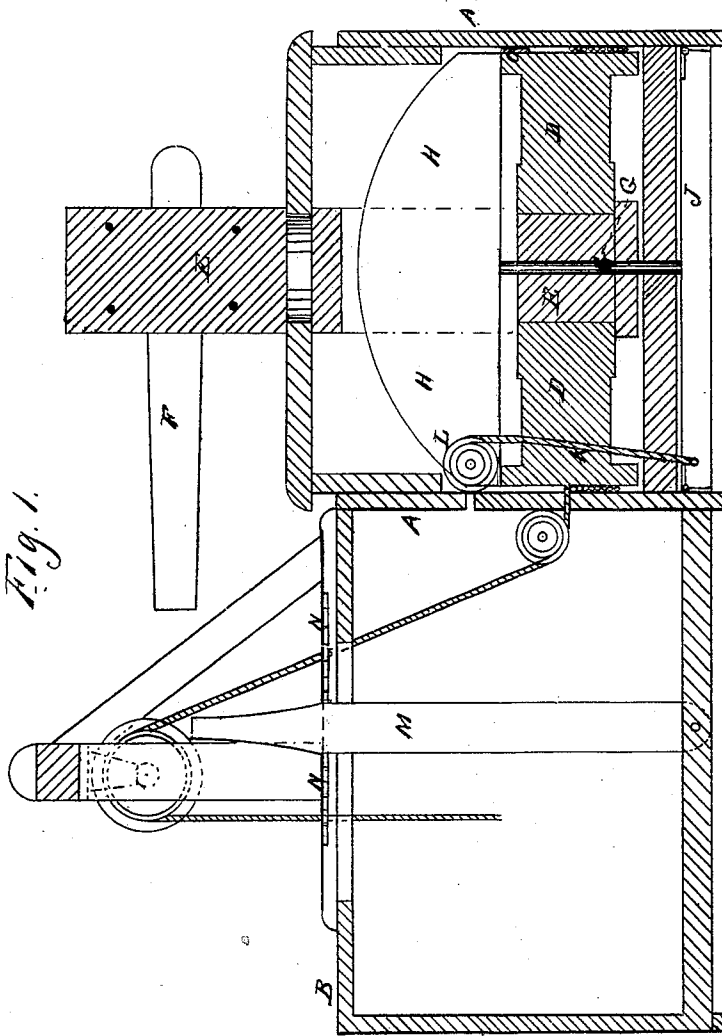


J. C. MARSHALL.
Hoisting Whims.

No. 138,811.

Patented May 13, 1873.



Witnesses

John L. Boone
A. T. Richardson

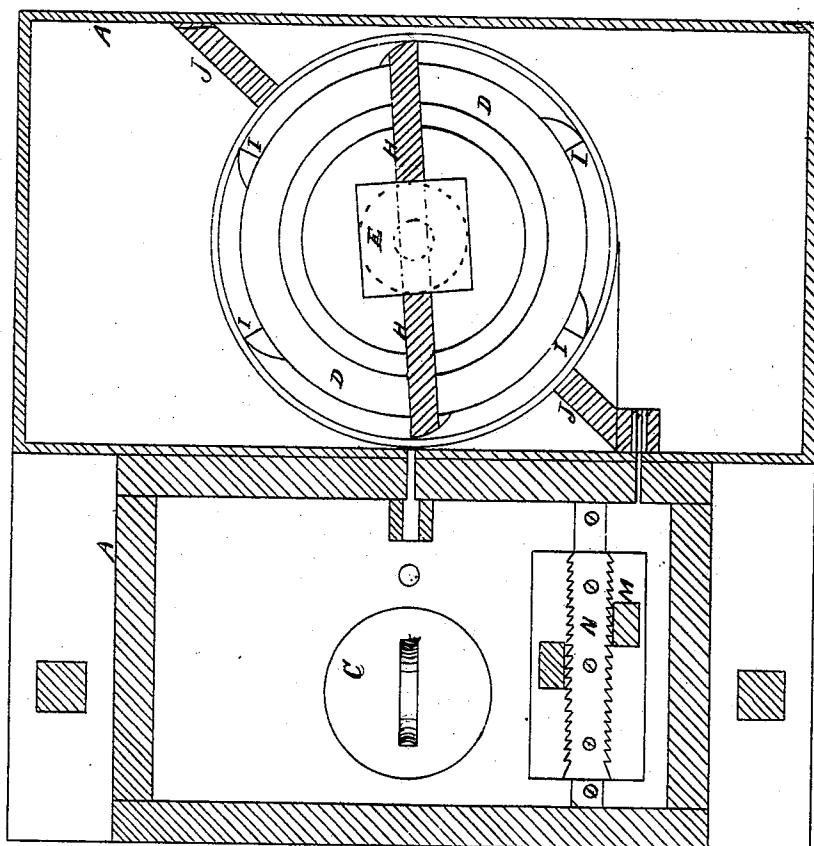
Joseph C. Marshall
per Deway &
atty

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Fig. 2.



Witnesses

John L. Boone
C. M. Richardson

Joseph C. Marshall
per Sewery & Co.
attys

UNITED STATES PATENT OFFICE

JOSEPH C. MARSHALL, OF SAN FRANCISCO, CALIFORNIA.

IMPROVEMENT IN HOISTING-WHIMS.

Specification forming part of Letters Patent No. **138,811**, dated May 13, 1873; application filed March 26, 1873.

To all whom it may concern:

Be it known that I, JOSEPH C. MARSHALL, of San Francisco city and county and State of California, have invented Improvements in Whims; and I do hereby declare the following description and accompanying drawing are sufficient to enable any person skilled in the art or science to which it most nearly appertains to make and use my said invention or improvement without further invention or experiment.

The object of my invention is to provide an improvement in hoisting-whims; and it consists in a novel mechanism for disconnecting or connecting the horse-power and the hoisting-drum; and also in so arranging the brake-lever and the adjusting-lever that both will be convenient to the hand of the person who attends the shaft.

Referring to the accompanying drawing for a more complete explanation of my invention, Figure 1 is a sectional side elevation of my whim. Fig. 2 is a horizontal section.

A is a suitable frame which contains the mechanism. B is a floor over the shaft or well, which is shown at C. The hoisting-drum D rotates horizontally around a vertical axle, E, upon which it turns loosely. The axle turns in a step at its lower end, and has its upper end pierced to receive the end of the bar F, to which the horse is attached. In order to connect and disconnect the drum and axle at pleasure, a small shaft or rod, G, extends up through the center of the axle E from a point below the step to a point just above the upper end of the drum D. A slot is made through the square upper part of the driving-axle E, just above the drum, and a stout cross-bar, H, passes through this slot, its middle resting upon the top of the rod G and its outer ends standing above the outer rim of the drum. Around this rim are placed, at intervals, lugs or blocks I, with which the cross-bar H will engage when it is let down; and thus, when the axle E is moved by the horse, it will turn the drum by means of this cross-bar.

When the cross-bar is elevated so as to stand

clear of the lugs I the axle may be revolved without affecting the drum, and the drum can be revolved in an opposite direction to lower a bucket without interfering with the axle or power.

In order to raise and lower the cross-bar H the rod G extends, as before described, from the middle of the bar down through the center of the axle to a point below the step on which the axle turns. Here it rests upon a lever, J, one end of which is hinged at some suitable point, while the other end has a cord or chain, K, secured to it and passing over a pulley, L, from which it leads to a lever, M, which stands close to the mine-shaft and within easy reach of the bucket-tender. A rack, N, serves to hold this lever M at any desired point.

The brake consists of a strap, O, passing around the drum, one end being fast while the other is connected with a lever, P, which is situated by the side of the lever M and held by a similar rack.

By this construction I am enabled to perfectly govern the movements of the hoisting-drum, making it entirely independent of the power by the movement of a lever; and if an unruly animal be in use, no danger need be apprehended, as the power can be instantly detached and the horse allowed to continue his movements while the bucket remains stationary or is lowered, as desired.

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

In combination with the drum D, with its lugs I, and the axle E with the cross-bar H and rod G, the lever J, cord or chain K, and hand-lever M with its holding-rack, substantially as and for the purpose herein described.

In witness whereof I hereunto set my hand and seal.

JOSEPH CAMEL MARSHALL. [L.S.]

Witnesses:

JOHN L. BOONE,
C. M. RICHARDSON.