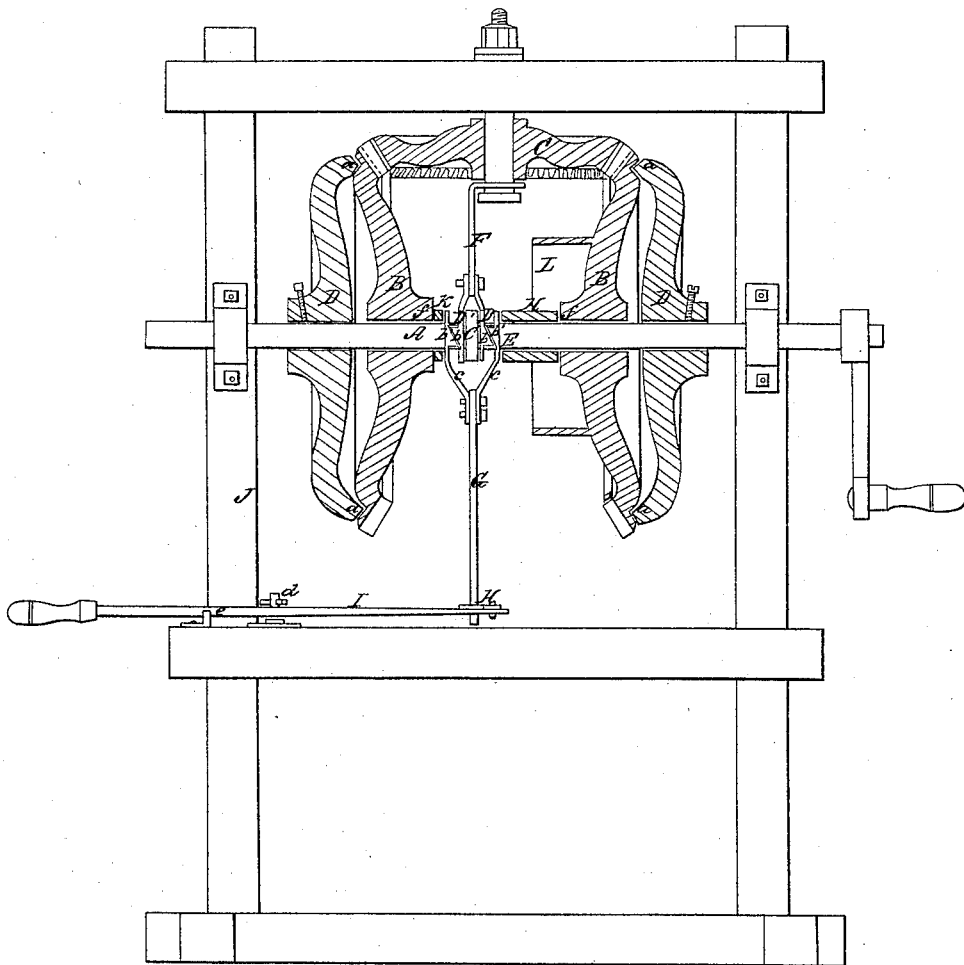


*Mc Intyre & Reeves,*

*Elevator.*

*N<sup>o</sup> 45,062.*

*Patented Nov 15, 1864.*



*Witnesses;*  
*C. L. Topliff*  
*Henry Morris*

*Inventors;*  
*D. Mc Intyre*  
*Geo C. Reeves*  
*By Munn & Co*  
*Attys*

# UNITED STATES PATENT OFFICE.

DOUGLASS MCINTYRE AND GEORGE C. REEVES, OF CENTRAL CITY, COLO.

## IMPROVEMENT IN HOISTING-MACHINES.

Specification forming part of Letters Patent No. 45,062, dated November 15, 1864.

*To all whom it may concern:*

Be it known that we, DOUGLASS MCINTYRE and GEORGE C. REEVES, of Central City, in the Territory of Colorado, have invented a new and Improved Hoisting-Machine; and we do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawing, forming part of this specification, said drawing representing a vertical central section of the invention.

This invention relates to a new and improved hoisting apparatus, designed more especially for elevating or drawing water, but applicable to other purposes.

The invention consists in a novel and improved arrangement of a friction-clutch and gearing, as hereinafter fully shown and described, whereby the motion of the gearing may be reversed at the will of the attendant and any number of devices operated from one and the same shaft.

A represents a shaft, on which two bevel-toothed wheels, B B, are placed loosely, and into which a horizontal bevel-wheel, C, gears.

D D are friction-pulleys, which are keyed or otherwise secured on the shaft A, one being at the outer side of each bevel-wheel B, and curved at their inner edges to form a rim, *a*, to bear against the rear of the wheels B when pressed in contact with them.

On the shaft A, between the wheels B B, there is a fixed collar or hub, C, and on the shaft A at each side of this fixed collar there is a ring, D', having two or more beveled projections, *b*, extending laterally from it, and which bear against similar projections, *b'*, on rings E. The rings D' E are placed loosely on the shaft A, the rings D' being attached to a pendant, F, which is connected to the axis of the horizontal wheel C, and the rings E are attached by arms *c* to a rod, G, which extends downward, and is connected by a link, H, with a lever, I, the latter having its fulcrum at *d*, and projecting over a plate, *e*, secured

to the framing J, which supports the shaft A and the axis of the wheel C. The outer surfaces of the rings E E are perfectly smooth, and bear against collars K, placed loosely on shaft A, between the rings E E and the hubs *f f* of the wheels B B, as clearly shown in the drawing. The projections *b b'* of the two pairs of rings D' E are placed in reverse positions, and hence it will be seen that by actuating the lever I and turning the rings E E one of the collars K will be pressed against its wheel B and the latter pressed against its friction-pulley D, which, in consequence of being connected to the shaft A, will communicate motion to the wheel pressed in contact with it, said wheel turning with the shaft A, while the other wheel will turn loosely on the shaft in a reverse direction. By moving the lever I in a reverse direction the other wheel, B, which was previously loose on the shaft, will in the same way become connected to it, the one previously connected being freed from the shaft. Thus it will be seen that if a drum, L, be connected to each wheel B with a rope and bucket attached, said buckets may be alternately raised and lowered at the will of the operator or attendant and irrespective of any other number of similar devices which may be on the same shaft A, as each device will operate independently of the other.

We claim as new and desire to secure by Letters Patent—

The two bevel-toothed wheels B B, placed loosely on the shaft A, with the horizontal toothed wheel C, gearing into them, in combination with the friction-pulleys D D, keyed or otherwise secured on the shaft A, the stationary rings D', and the movable rings E, provided with the beveled projections *b b'*, and also placed on the shaft A, all arranged to operate in the manner substantially as and for the purpose herein set forth.

DOUGLASS MCINTYRE.  
GEO. C. REEVES.

Witnesses:

JOHN YOUNG,  
NATHANIEL YOUNG.