

(No Model.)

C. G. ROSS.

DERRICK.

No. 302,035.

Patented July 15, 1884.

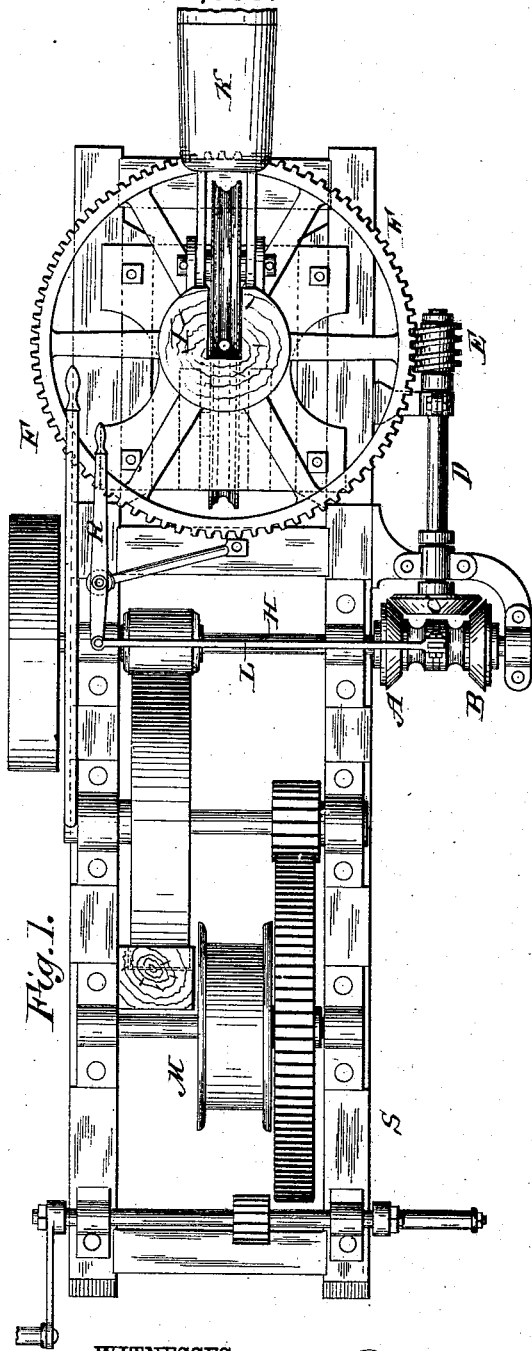


Fig. 1.

WITNESSES:

Wm Beyer
Co. Bedgwick,

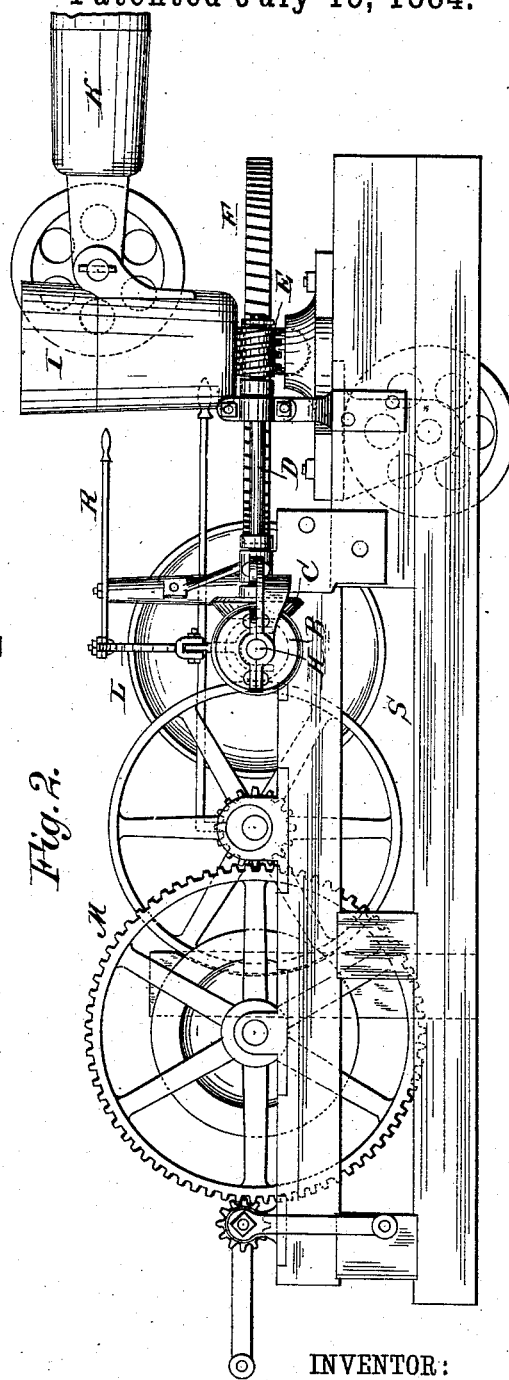


Fig. 2.

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CORNELE G. ROSS, OF RUTLAND, VERMONT, ASSIGNOR TO THE LINCOLN
IRON WORKS, OF SAME PLACE.

DERRICK.

SPECIFICATION forming part of Letters Patent No. 302,035, dated July 15, 1884.

Application filed May 21, 1884. (No model.)

To all whom it may concern:

Be it known that I, CORNELE G. ROSS, of Rutland, in the county of Rutland and State of Vermont, have invented a new and useful Improvement in Derricks, of which the following is a full, clear, and exact description.

The object of my invention is the operation of derricks more conveniently and rapidly than heretofore; and it consists in a combination of worm and friction gearing whereby the mast and boom of a derrick can be turned at the same time a load is being raised or lowered, as hereinafter described and claimed.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in both the figures.

Figure 1 is a plan view of a derrick with my improvements, the boom and mast being cut off, and Fig. 2 is a side elevation of the same.

The bed-frame S and the winding-gear M for raising and lowering the load may be of any usual construction.

H is the running-shaft driven by suitable connection to a prime mover.

I is the mast, and K the boom. On the socket of mast I is keyed a worm-wheel, F, and at the side of frame S is mounted a horizontal shaft, D, which at one end carries a worm, E, engaging wheel F, and at the other end of shaft D is a bevel friction-wheel, C. On the running-shaft H are two bevel friction-wheels, A B, connected by a loose sleeve that is fitted to slide on the shaft, but connected thereto by a feather and groove.

R is a lever connected by a rod, L, to the sleeve, so that either friction-wheel A B may be brought into contact with wheel C. The shaft D may thus be made to turn in either direction, and by its connection to worm-wheel F, the mast correspondingly turned, and the boom with its load swung to right or left. It will be seen that this may be done while the hoisting-gear M is being operated to raise or to lower the load, the shaft H driving both sets of gearing either alone or independently.

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

1. In a derrick, the combination of worm-wheel F, worm E, and shaft D, operated from the running-shaft, combined with the mast and hoisting mechanism, substantially as described.

2. The combination in a derrick, of hoisting-gear M, running-shaft H, lever R, friction-wheels A B C, and shaft D, having connections for turning the mast, all substantially as shown and described.

3. The combination, in a derrick, of mast I, worm-wheel F, worm E, shaft D, friction-wheels A B C, operating-shaft D, and lever R, substantially as described, for operation as specified.

CORNELE G. ROSS.

Witnesses:

HENRY C. FARRAR,
W. A. PATRICK, Jr.