

(No Model.)

C. G. ROSS.

DERRICK.

No. 302,035.

Patented July 15, 1884.

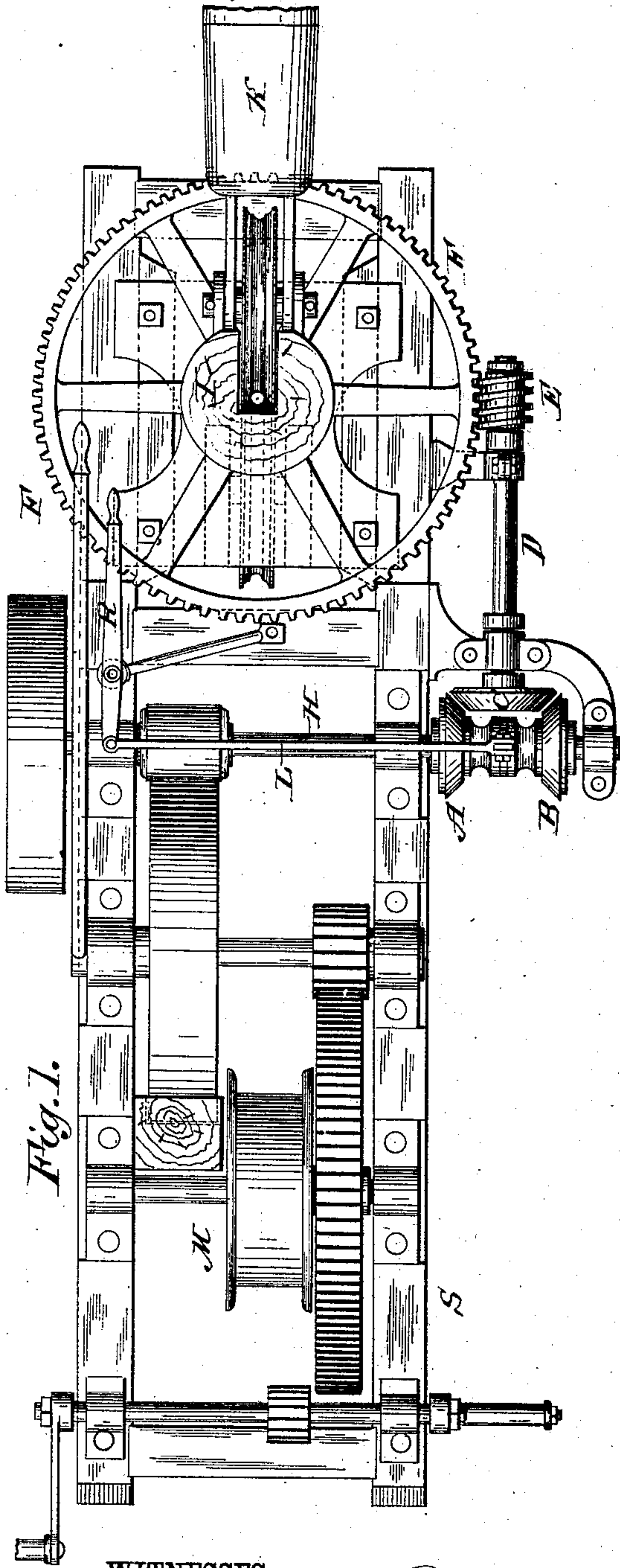


Fig. 1.

WITNESSES:

*Chas Beyer*  
*C. Sedgwick*

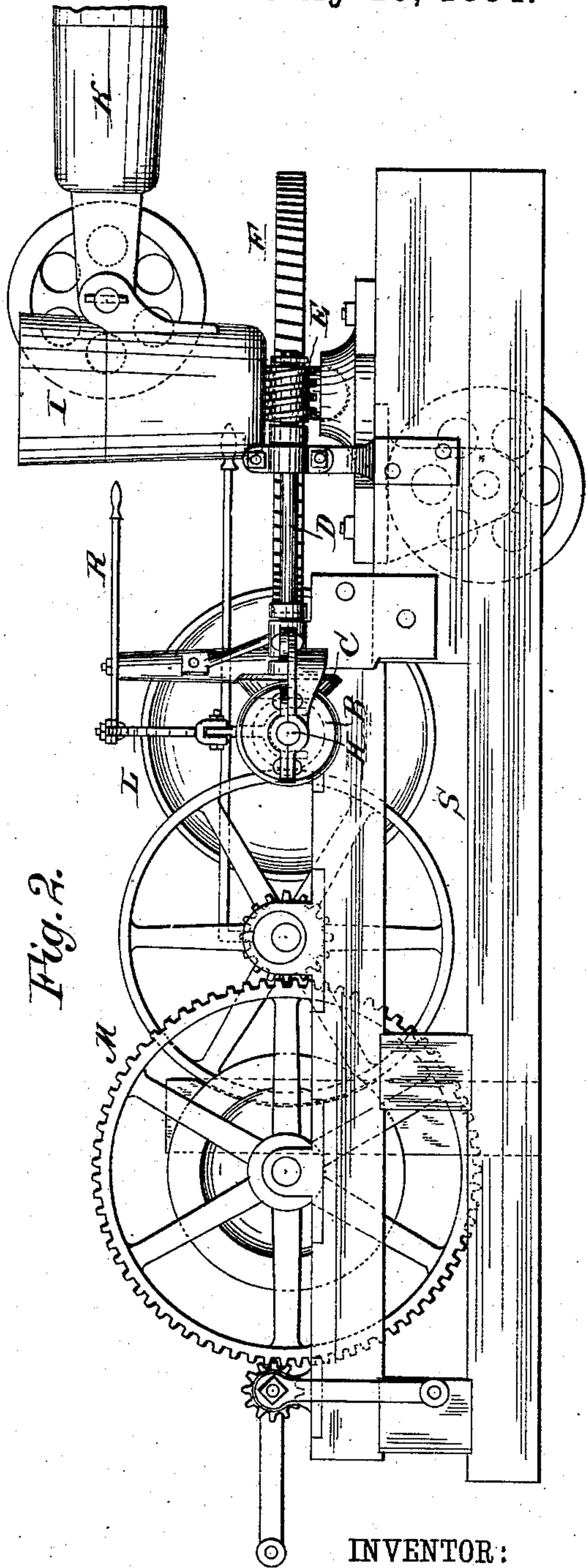


Fig. 2.

INVENTOR:

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# UNITED STATES PATENT OFFICE.

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.