V. DUHAMEL.

Hoisting-Machine.

No. 164,432. Patented June 15, 1875.

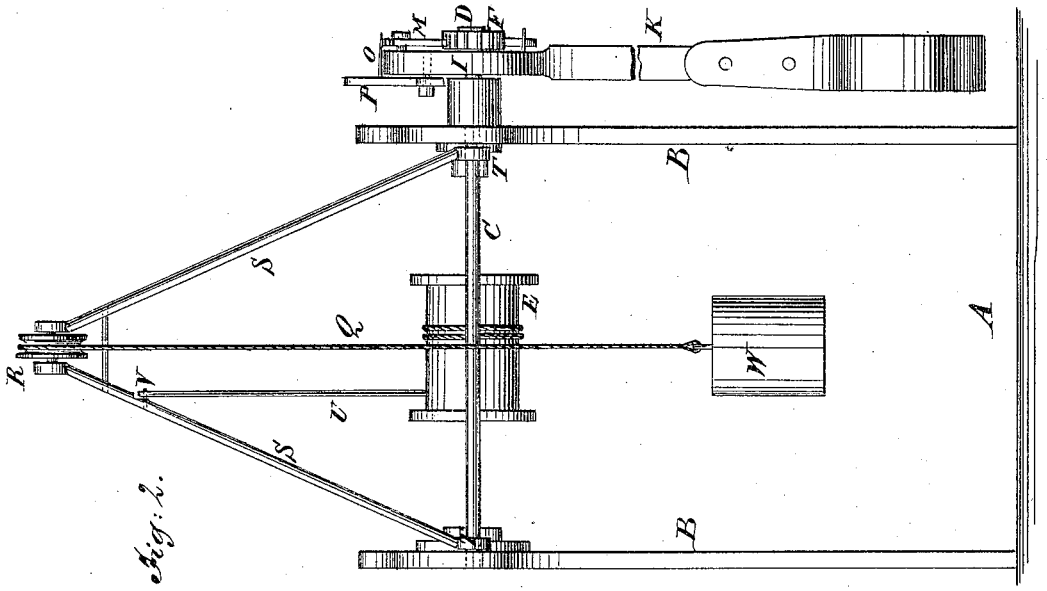

Fig. 2.

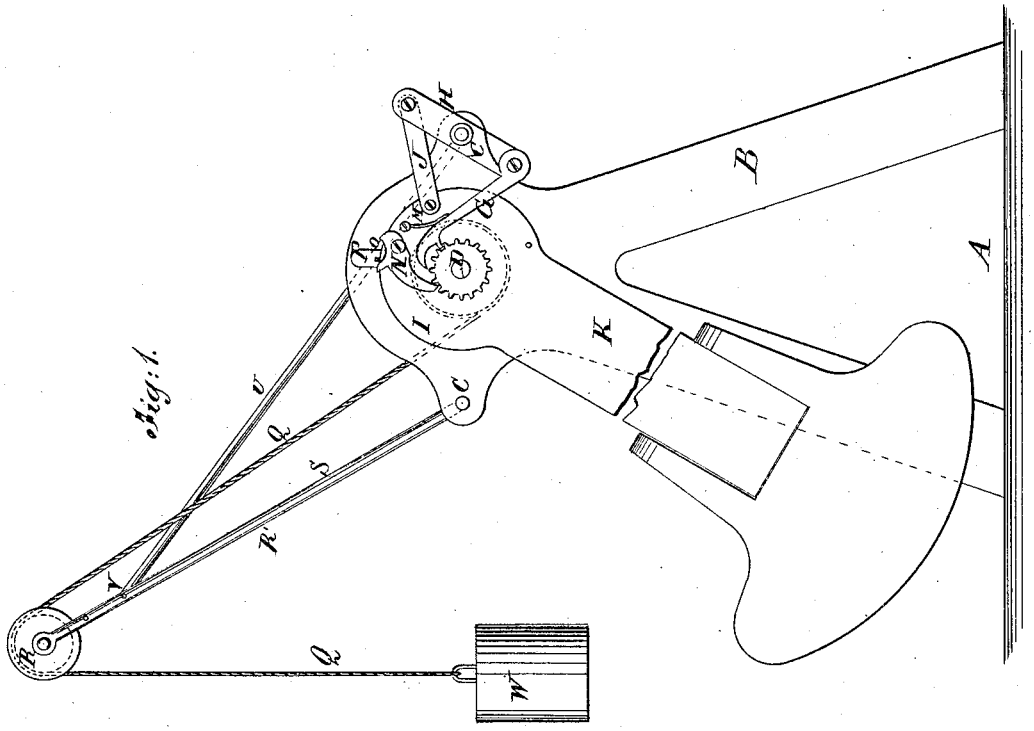

Fig. 1.

WITNESSES:

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VICTOR DUHAMEL, OF EASTON, PENNSYLVANIA.

IMPROVEMENT IN HOISTING-MACHINES.

Specification forming part of Letters Patent No. **164,432**, dated June 15, 1875; application filed May 1, 1875.

To all whom it may concern:

Be it known that I, VICTOR DUHAMEL, of Easton, in the county of Northampton and State of Pennsylvania, have invented a new and useful Improvement in Hoisting-Machines, of which the following is a specification:

The object of this invention is to furnish simple and efficient means for hoisting coal, merchandise, or other articles; and it consists of a machine which is put in operation by means of a pendulum and ratchet and pawls, the construction being hereinafter more fully described.

In the accompanying drawing, Figure 1 is a side elevation, showing the mechanism by which the machine is operated. Fig. 2 is a front elevation.

Similar letters of reference indicate corresponding parts.

A is a bed-plate, upon which are the two stands B B. These stands are connected together by rods C and a shaft, D, to which the drum E is attached. The shaft extends across the machine, and on its outer end is a ratchet-wheel, F. G is a pawl attached to the bar H, which bar vibrates on the projecting end of one of the connecting-rods C. The pawl G is pivoted to one end of this bar; the other end is connected with the head I of the pendulum by the plate-rod J. K is the pendulum, which oscillates freely on the drum-shaft D. The oscillation of the pendulum works the pawl, which revolves the shaft and turns the drum to wind up the hoisting-rope. The pawl G is held to its work by the spring *m*. N is a holding-pawl pivoted to the head of the pendulum, which is held down to its work with the ratchet by the pin O of the pivoted bar P. The pendulum may be of any length and weight, so that by a slight oscillation the pawl will be made to work and the drum-shaft be revolved. Q is the hoisting rope or chain. This rope is attached to the drum, from which it extends upward and over the pulley R, which pulley is mounted on a triangular-shaped frame, R′, consisting of the rods S S, which rods have eyes T T, through which passes one of the connecting-rods C. This frame is held in position when elevated by the rod U, which rod extends from the other connecting-rod C, and is attached (removably) to the frame, as seen at V. W represents a weight at the end of the rope.

When the machine is not in use, the frame R′, by detaching the rod U, may be folded down, so as to occupy but little space.

This hoisting-machine may be used for all the purposes for which it is adapted.

For large machines, or when considered necessary, a fly-wheel may be employed.

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

The combination, with cord Q, for attachment to the weight, passing over a pulley, R, the shaft D, having drum and ratchet, and a pendulum, K, having pawl N, of the pawl G, lever H, and strap J, substantially as and for the purpose specified.

VICTOR DUHAMEL.

Witnesses:

JAMES SIMONS,

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