

UNITED STATES PATENT OFFICE.

CHRISTOPHER C. GISH, OF SALEM, KANSAS.

IMPROVEMENT IN MOTORS.

Specification forming part of Letters Patent No. 201,665, dated March 26, 1878; application filed December 20, 1877.

To all whom it may concern:

Be it known that I, CHRISTOPHER C. GISH, of Salem, in the county of Jewell and State of Kansas, have invented a new and Improved Motor, of which the following is a specification:

Figure 1 is a plan view of my improved motor. Fig. 2 is a vertical section taken on line *x x* in Fig. 1.

Similar letters of reference indicate corresponding parts.

My invention consists in the combination of a heavily-weighted chain, a chain-wheel of large diameter, and an engine, a water-wheel, or other convenient power for raising the chain to the top of the wheel, the object being to utilize the weights on the chain as they descend.

Referring to the drawing, A is a frame, which supports the various parts of the machine; and B is a double chain-wheel of large diameter, journaled in the frame A, and carrying the chains *a a*, which run over the chain-wheels *b b*, secured on the shaft C, and over guide-rollers *c d* at the top of the frame, and also over rollers *e f*, journaled in the side of the frame. To the chains *a a* weight-bars *g* are attached at short intervals. These weight-bars may be made of any heavy material—such as lead or iron. The chains, thus connected, are guided laterally by wheels *h*, journaled at the side of the frame. Upon the shaft C a crank, *i*, is placed, which is driven by the steam-engine

cylinder *k*. The opposite end of the shaft C is connected with the vertical shaft *l* of a turbine water-wheel.

Power is taken from the shaft D of the wheel B. In the present case it is transmitted to a shaft, *m*, which is connected with a burr-stone, *n*, for grinding grain.

The operation of the motor is as follows: The shaft C is rotated by means of the engine, or by a water-wheel, or by horse-power, or any other convenient motor, so as to raise the slack portion of the weighted chain that is suspended below the wheel B. The weights that lie upon the wheel from a point at the top over a quarter of its circumference are in this manner rendered effective in propelling the wheel B.

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

1. The combination of the heavily-weighted chains, the chain-wheel, and a motor for elevating the chains, substantially as herein shown and described.

2. The chain-wheel B, the chains *a*, carrying weights *g*, the chain-wheels *b b*, and a series of guide-rollers, in combination, substantially as and for the purpose herein shown and described.

CHRISTOPHER C. GISH.

Witnesses:

L. P. LYTLE,
JOHN N. CRAWFORD.