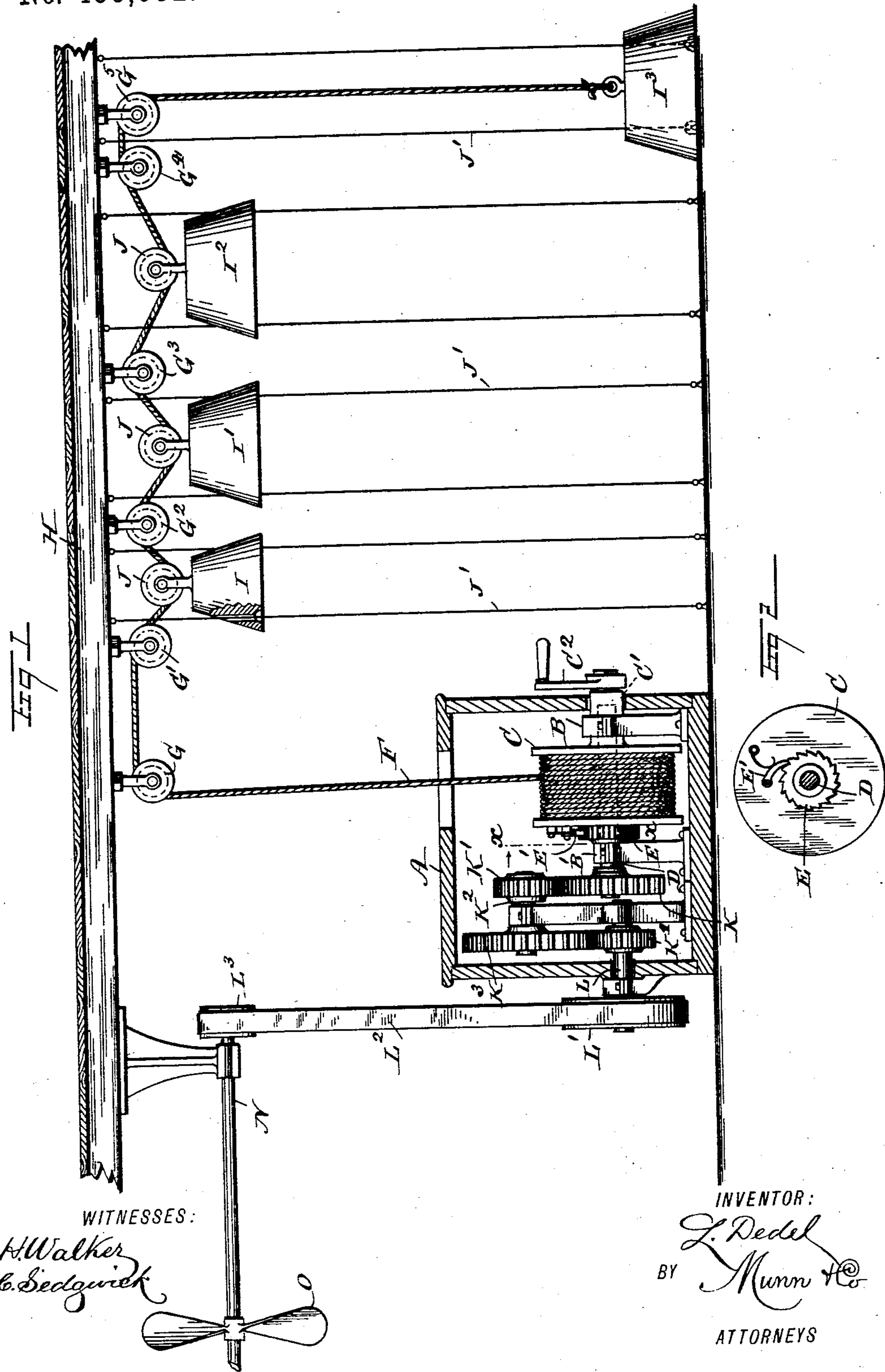


(No Model.)

L. DEDEL.
WEIGHT POWER.

No. 455,662.

Patented July 7, 1891.



UNITED STATES PATENT OFFICE.

LOUIS DEDEL, OF NEW ORLEANS, LOUISIANA.

WEIGHT-POWER.

SPECIFICATION forming part of Letters Patent No. 455,662, dated July 7, 1891.

Application filed January 3, 1891. Serial No. 376,568. (No model.)

To all whom it may concern:

Be it known that I, LOUIS DEDEL, of New Orleans, in the parish of Orleans and State of Louisiana, have invented a new and Improved Weight-Power, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved weight-power which is simple and durable in construction, very effective in operation, takes up but very little room, and is more especially designed for driving fans and other light machinery.

The invention consists in certain parts and details and combinations of the same, as will be fully described hereinafter, and then pointed out in the claims.

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 side elevation of the improvement with parts in section and as applied to drive fans, and Fig. 2 is a sectional face view of the drum-ratchet mechanism on the line *xx* of Fig. 1.

The improved weight-power is provided with a suitably-constructed casing A, in which are secured bearings B and B', of which the former forms the journal for the hub C' of a drum C and the other bearing B' forms the journal for a shaft D, extending centrally through the drum into its hub, so as to form a bearing for the shaft. The shaft D is adapted to be connected with the drum C by a ratchet mechanism illustrated in the drawings and consisting of a ratchet-wheel E, secured on the shaft D and adapted to be engaged by a spring-pressed pawl E', pivoted on one face of the drum C. Thus when the drum turns in one direction the pawl E' glides over the teeth of the ratchet-wheel E without moving the shaft D, and when turned in an opposite direction the pawl E', acting on the ratchet-wheel E, turns the shaft with the drum.

On the drum C is adapted to be wound a rope F, extending upward through an opening in the casing A to pass over a series of pulleys G G' G² G³ G⁴ G⁵, held on the ceiling H or a suitable frame erected above the casing A. Between adjacent pulleys are hung on the rope F a series of weights I I' I² I³, of

which the weights I, I', and I² are connected with the rope by pulleys J, while the last-mentioned weight I³ is directly secured to the free end of the rope F. The weights are mounted to slide vertically on suitable guideways J', extending from the ceiling H to the floor. The weights I I' I² I³ increase in size, and consequently in weight, in such a manner that the last weight I³ is sufficiently heavy to hold the other three weights in an uppermost position, as illustrated in Fig. 1, at the same time having left sufficient power to actuate the drum C. The second weight I² is of such size that it holds the weights I and I' in an uppermost position after the weight I³ has descended onto the floor, as illustrated in Fig. 1, surplus weight, however, being left to actuate the drum C. The weight I' is somewhat heavier than the weight I, so as to hold the weight I in an uppermost position while it descends to actuate the drum C after the weights I³ and I² rest on the floor.

The shaft D carries a gear-wheel K, meshing into a pinion K', secured on a shaft K², carrying a gear-wheel K³, meshing into a pinion K⁴, secured on a shaft L, also mounted to turn in suitable bearings in the casing A. The shaft L extends to the outside of the casing A and carries at its outer end a pulley L', connected by a belt L² with a small pulley L³, secured on the shaft N of the mechanism to be driven. As shown in the drawings, the said shaft N carries a fan O.

On the outer end of the hub C' of the drum C is secured a crank-arm C² for conveniently winding up the rope F of the drum C, so as to raise all the weights I, I', I², and I³ into an uppermost position. As soon as the operator has accomplished this and released the crank-arm C², then the outermost weight I³ begins to descend, at the same time holding the weights I, I', and I² in an uppermost position, as previously described. The downward movement of the weight I³ causes an unwinding of the rope F from the drum C, so that the latter is rotated, and by the ratchet mechanism rotates the shaft D, which by the train of gear-wheels, pulleys, and belts, previously described, rotates the shaft N of the mechanism to be driven. As soon as the weight I³ rests on the floor, then the next weight I² commences to descend on its bearings J', and

thereby continues the rotary motion of the drum C and the mechanism to be driven. When the weight I² has reached and rests on the floor, the next weight I' commences to descend to keep up the motion of the drum and the shaft N. When it reaches the floor, the last weight I commences to descend and to actuate the drum until it finally reaches the floor, the rope F then being almost completely unwound from the drum C. The several weights are then again moved to their former position by the operator turning the crank-arm C², so as to wind up the rope, the shaft D then remaining at a standstill, as the pawl E' then glides backward over the teeth of the ratchet-wheel E.

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

1. The combination, with the power-drum, of a rope wound thereon, a series of pulleys or guides above the drum and over which passes a run of the rope, and a series of weights hung on the rope between the pulleys, substantially as set forth.

2. A weight-power comprising a drum connected with the machine to be driven, a rope adapted to be wound on the said drum, a series of fixed pulleys over which passes the

said rope, and a series of weights hung on a horizontal run of the said rope and increasing in size and weight, substantially as shown and described.

3. A weight-power comprising a drum connected with the machine to be driven, a rope adapted to be wound on the said drum, a series of fixed pulleys over which passes the said rope, a series of weights hung on the said rope and increasing in size and weight, and guideways on which the said weights are fitted to slide vertically, substantially as shown and described.

4. A weight-power comprising a drum connected with the machine to be driven, a rope adapted to be wound on the said drum, a series of fixed pulleys over which passes the said rope, a series of weights hung on the said rope and increasing in size and weight, a shaft connected by a ratchet mechanism with the said drum, and a train of gear-wheels connected with the said shaft and with a second shaft adapted to be connected with the machine to be driven, substantially as shown and described.

LOUIS DEDEL.

Witnesses:

GUS BLOECHER,
GEO. BLOECHER.