P. D'AGOSTINO.

WEIGHT POWER PRODUCING MACHINE.

APPLICATION FILED MAR. 13, 1908.

951,415. Patented Mar. 8, 1910.

Fig. 1.

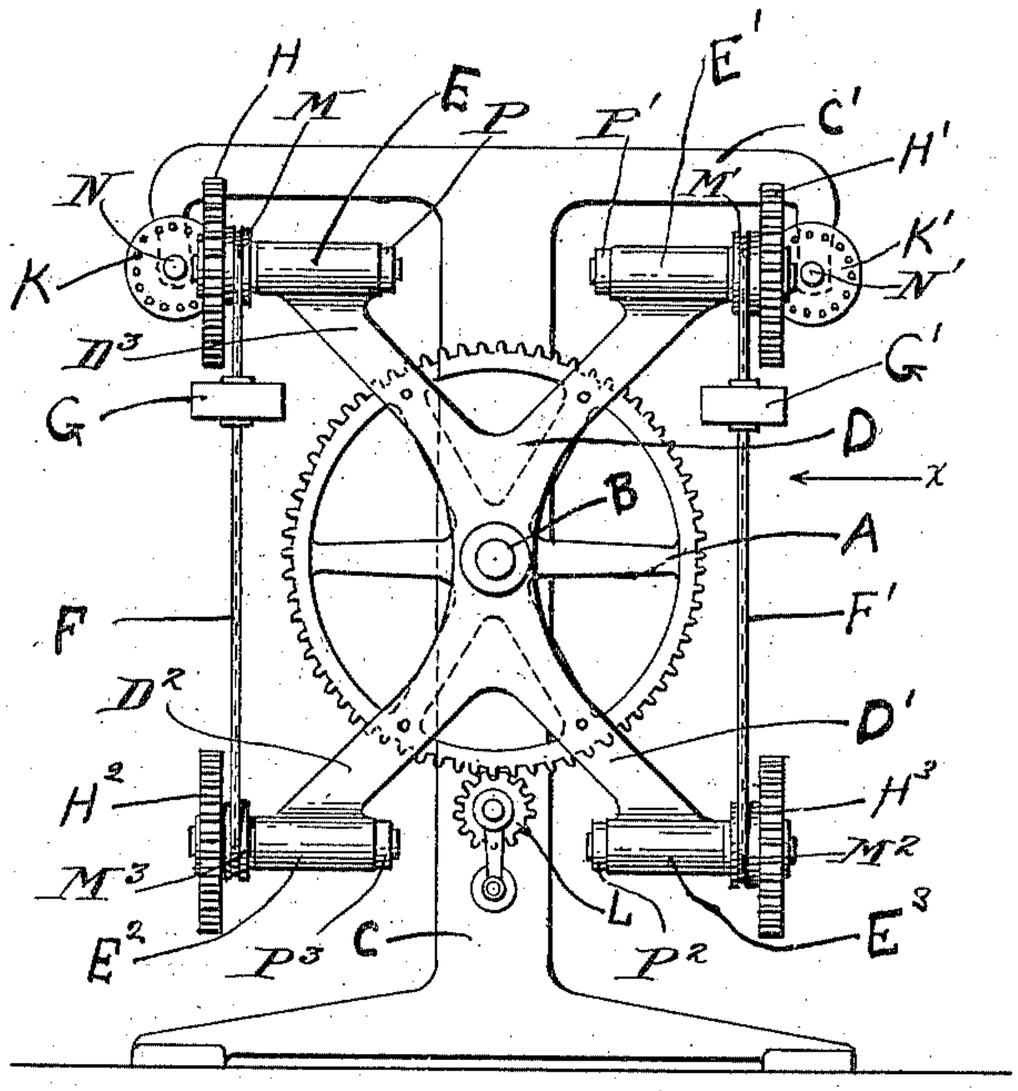
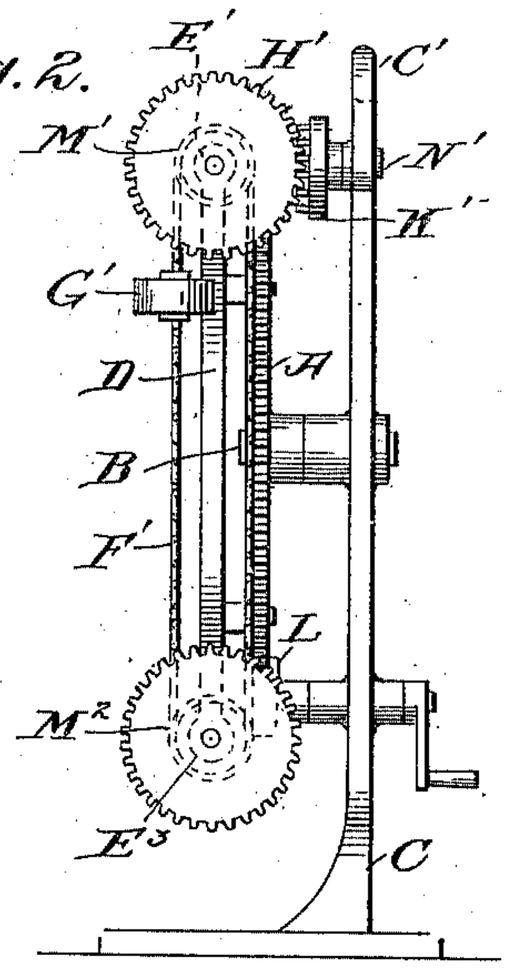


Fig. 2.



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UNITED STATES PATENT OFFICE.

PASQUALE D'AGOSTINO, OF HARTFORD, CONNECTICUT, ASSIGNOR OF ONE-HALF TO CLARENCE R. ROOT, OF HARTFORD, CONNECTICUT.

WEIGHT POWER-PRODUCING MACHINE.

951,415. Specification of Letters Patent. Patented Mar. 8, 1910.

Application filed March 13, 1908. Serial No. 420,896.

To all whom it may concern:

Be it known that I, PASQUALE D'AGOSTINO, citizen of the United Sates, residing at Hartford, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Weight Power-Producing Machines, of which the following is a specification.

The object of my invention is to provide a device of the class specified which has features of novelty and advantage.

Figure 1 is a lateral view of the machine. Fig. 2 is a side view in the direction of the arrow —*x*— in Fig. 1.

Referring now more particularly to the drawings: —C— is a standard to which is attached the horizontal bar —B— on which as an axis the cog-wheel —A— rotates. Arms —D—, —D¹—, —D²—, —D³— project from wheel —A—, being rigidly attached thereto in any manner. These arms terminate in sleeves —E—, —E¹—, —E²—, —E³—. The spur wheels —H—, —H¹—, —H²—, —H³—, are attached to shafts —P—, —P¹—, —P²—, —P³— revoluble in said sleeves. On these shafts are sprocket-wheels —M—, —M¹—, —M²—, —M³—. Endless chains —F—, —F¹—, pass around and engage the teeth of sprockets —M—, —M³—, and —M¹—, —M²—, respectively. At a point on chain —F— weight —G— is attached and weight —G¹— is similarly attached to chain —F¹—. It will thus be seen that when weight —G— is moved up or down the chain —F— moves and causes the sprockets —M—, —M³— to revolve and with them the spur wheels —H—, —H²—. In the same manner a movement of weight —G¹— revolves the sprockets —M¹—, —M²— and the spur wheels —H¹—, —H³—. —K— and —K¹— are crown wheels whose teeth engage the cogs of the spur wheels —H—, —H¹—. Said crown wheels are connected to shafts —N—, —N¹—, revoluble in bearings in the ends of cross-bar —C¹— of the standard —C—.

The operation of the device is as follows: The machine at the beginning is in the position shown in Fig. 1 with the weights —G—, —G¹— raised close to the upper gearing where they may be fastened by any means. When it is desired to utilize the machine in performing work these weights are released and descend, by the force of gravity, causing, by means of the chain and sprocket connection the wheels —H—, —H¹—, —H²—, —H³— to revolve. The wheels —H— and —H¹— being in engagement with crown wheels —K— and —K¹— cause said crown wheels to revolve and these wheels in turn, by means of the shafts —N— and —N¹—, or in any other desired manner, transmit the power to the point of application. When the weights have, in this manner, expended their energy by descending close to the lower wheels —H²— and —H³—, the wheel —A— may be revolved on its axis —B— by rotating the pinion —L— which is itself turned by means of a crank or other device, until the wheels —H³— and —H²— assume the positions occupied by wheels —H— and —H¹— in Fig. 1 and the weight —G— that of —G¹— in Fig. 1 and vice versa. The machine may again be utilized by allowing the weights to descend, when the wheel —A— may be revolved once more and so on at the will of the operator. This machine thus furnishes a means by which weights may be repeatedly raised to a point at which work may be performed. A very small amount of effort is required to raise these weights by revolving the wheel —A— since the weights are so arranged as to approximately balance each other on each side of the wheel.

The wheels —H— and —H¹— will swing freely out of engagement with wheels —K— and —K¹— when wheel —A— is revolved. If so desired these wheels may be moved out of engagement with each other before wheel —A— is revolved by any means such as by moving wheels —K— and —K¹— rearwardly along their axes —N— and —N¹—. Besides the purpose of revolving the wheel —A— the cog-wheel —L— may be used to lock the wheel —A— in any position.

As modifications of the device there may be any number of arms —D—, —D¹— etc. which may be integral with wheel —A—. The wheel—A— may be dispensed with entirely: the frame from which the arms project being revolved directly on the axis —B—. The wheel —A— may be revolved from position to position by any other means than the pinion —L—. Belting and pulleys may be substituted for the chain and sprockets —F—, —M—, —M³— and —F¹—, —M¹—, M²—.

I claim—

1. In a device of the class specified, an axis, a wheel adapted to turn thereon, weights on the opposite sides of said wheel approximately balancing each other, revoluble shafts on the opposite sides of said wheel, means attached to said weights adapted to engage said shafts and to cause them to revolve, means whereby the weights may be returned to their initial position.

2. In a device of the class specified, an axis, a frame adapted to turn thereon, means for revolving said frame, bars projecting from said frame, bearings at the ends of said bars, shafts revoluble in said bearings, weights and means attached thereto adapted to engage said shafts.

3. In a device of the class specified, a wheel adapted to turn on a horizontal axis, arms projecting from said wheel, shafts revoluble in sleeves on the end of said arms, chains adapted to engage said shafts, and weights attached to said chains.

4. In a device of the class specified, an axis, a wheel adapted to turn thereon, cogs on the circumference thereof, a pinion engaging said wheel adapted to cause wheel to revolve, arms projecting from said wheel, bearings at the ends of said arms, shafts revoluble in said bearings, counter-shafting and means for connecting the shafts thereto, chains adapted to engage the respective pairs of said shafts, weights attached to said chains.

In testimony whereof I affix my signature in presence of two witnesses.

PASQUALE D'AGOSTINO.

Witnesses:

JOHN W. JOY,

C. R. ROOT.