P. E. JAY.

Fly-Wheel for Engine.

No. 203,623. Patented May 14, 1878.

Fig. 1

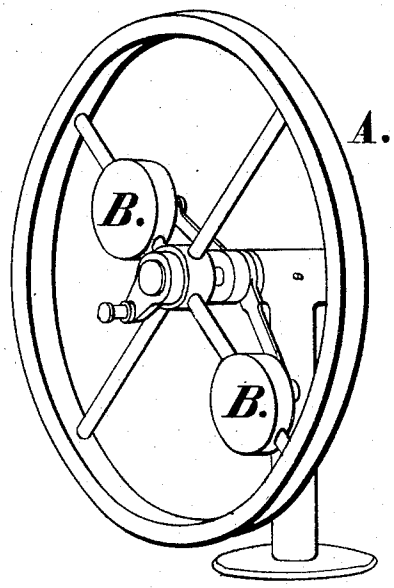
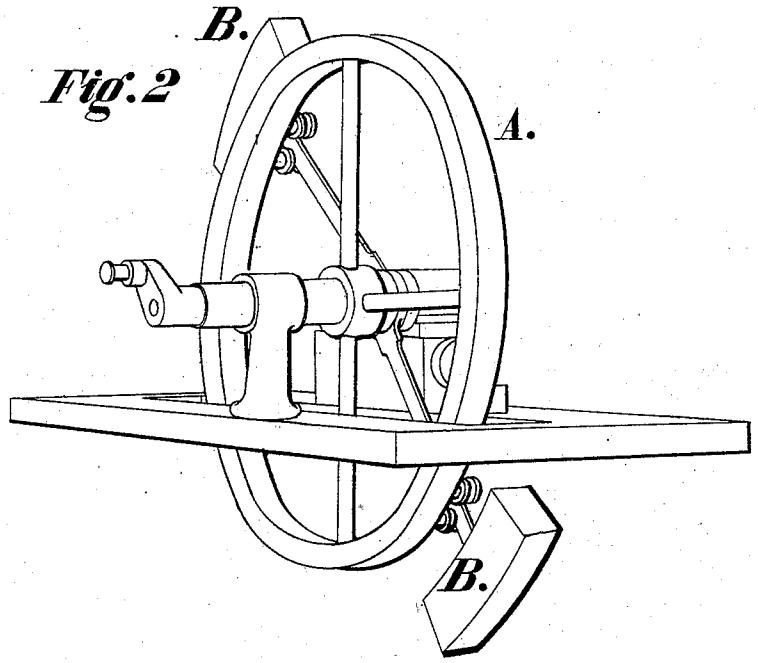


Fig. 2



Witnesses:

Thos. E. Randolph

Sam'l P. Hanson

Inventor:

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by Thos. H. Flanagan & Alexander

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UNITED STATES PATENT OFFICE.

PIERRE E. JAY, OF BETHLEHEM, PENNSYLVANIA.

IMPROVEMENT IN FLY-WHEELS FOR ENGINES.

Specification forming part of Letters Patent No. **203,623**, dated May 14, 1878; application filed April 26, 1878.

To all whom it may concern:

Be it known that I, PIERRE E. JAY, of Bethlehem, in the county of Northampton and State of Pennsylvania, have invented a new and useful Improvement in Steam and other Engines, of which the following is a specification:

My invention relates to a means of preventing wheels of engines of all sorts from resting upon the dead-center, and of imparting to them a more uniform motion; and it consists in a device by which weights are so located and moved as always to move the wheel off the center when it comes to rest, and to present to the connecting-rod the greatest resistance when its effective force is the greatest, and its least resistance when its effective force is the least, which is effected by the application to the wheel A of two or more weights, B B, which are connected to, and together revolve upon, an axis which is not concentric with, but is eccentric from, the axis of the wheel, so that the descending weight is at a greater distance from the center of the wheel than is the ascending weight, and hence exercises a greater force upon it.

Figure 1 shows a form of the device in which the weights revolve upon a fixed center, and are attached to and move longitudinally upon the arms of the wheel, which is specially applicable to smaller engines, sewing-machines, foot-lathes, &c. Fig. 2 shows a form of the device in which the weights revolve upon a center which is movable, by means of which their eccentricity can be increased or diminished at pleasure, or can be transferred from one side to the other, either by a screw, as shown, or by a lever, if preferred, and in this form the weights are attached to arms projecting beyond the line of the wheel, and are revolved by guides attached to the wheel.

The axis of the weights is so placed in reference to the axis of the wheel, and the position of the crank has such relation to the arms upon which the weights move, that the superior force of the descending weight will always move the crank-pin off the center when the wheel is at rest, and the crank-pin will present to the connecting-rod the greatest resistance as the crank approaches and passes the right angle, where the greatest force is exercised upon it, and will present the least resistance, and will, in fact, furnish a supplemental force, as it approaches and passes the right line, where the force of the connecting-rod is lost.

I claim as my invention—

In combination with the wheel A, the weights B B, revolving upon an axis eccentric from that of the wheel, either fixed or movable, constructed and operating substantially as and for the purpose described.

P. E. JAY.

Witnesses:
W. M. WENDELL,
EUGENE E. WEBER.