

A. H. Southwick.

Windmill.

N^o 76261

Patented Mar. 31, 1868.

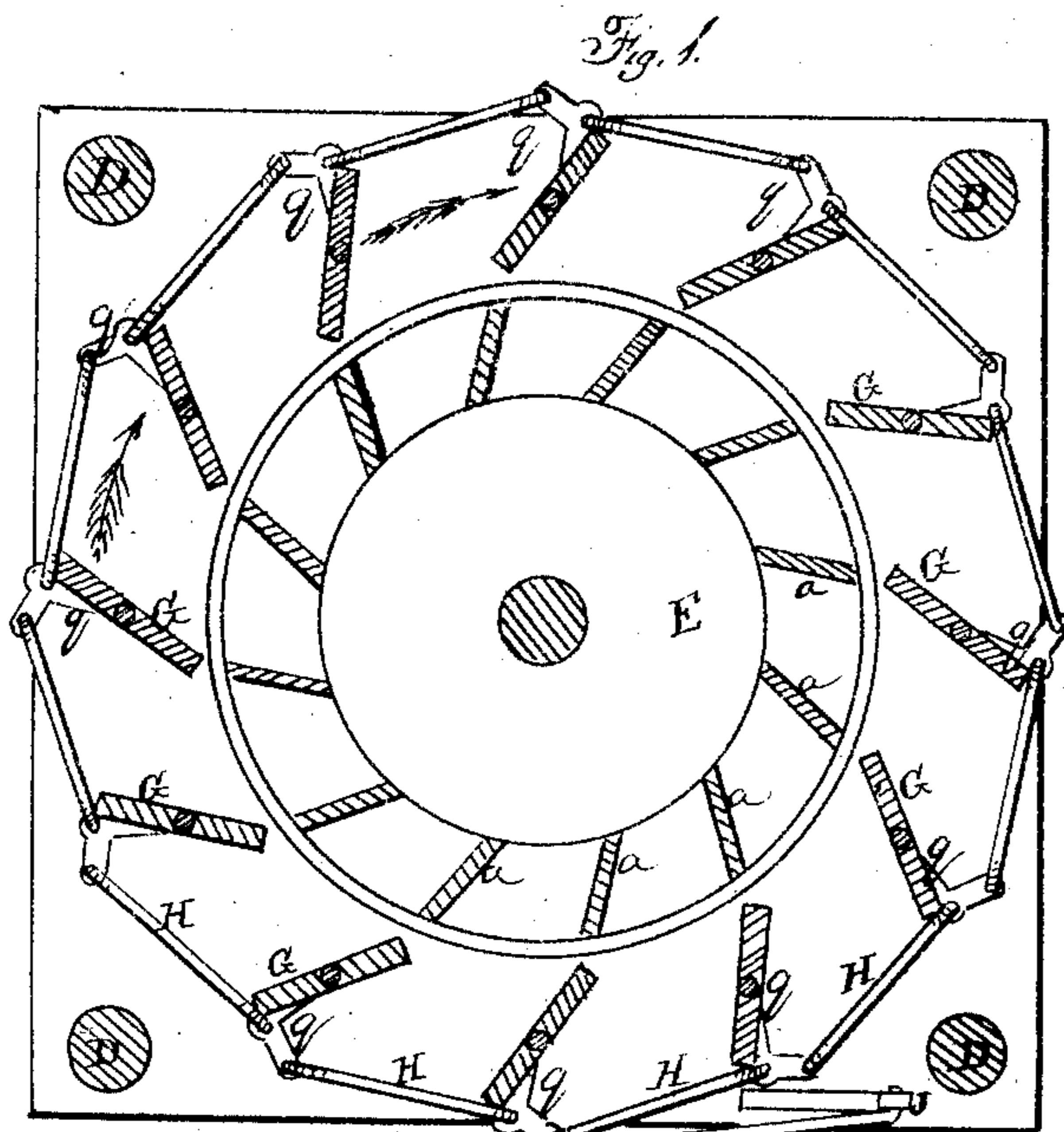
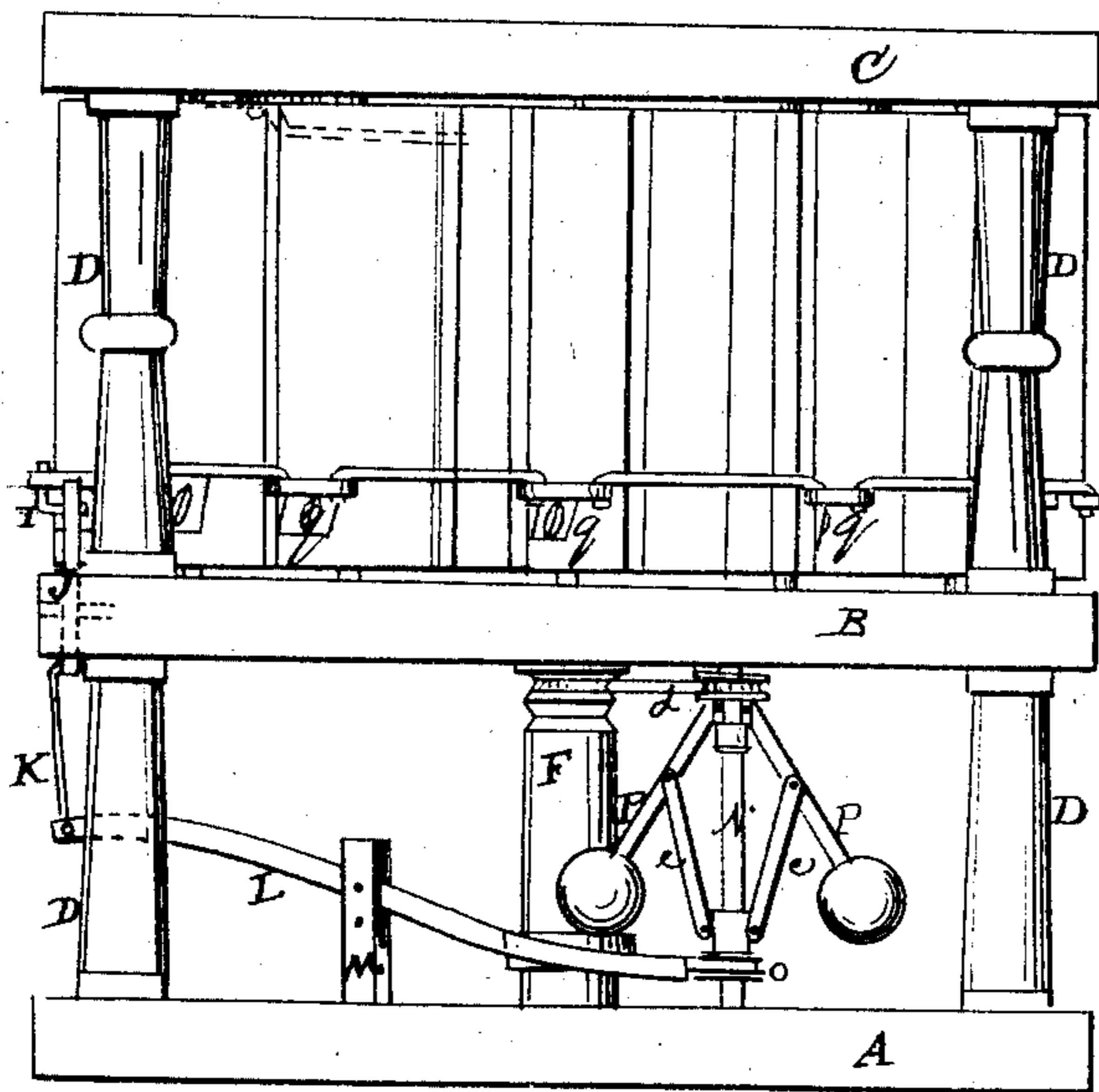


Fig. 2.



Witnesses

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ALBERT H. SOUTHWICK, OF OSKALOOSA, IOWA.

Letters Patent No. 76,261, dated March 31, 1868.

IMPROVEMENT IN WINDMILLS.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, ALBERT H. SOUTHWICK, of Oskaloosa, in the county of Mahaska, and in the State of Iowa, have invented certain new and useful Improvement in Windmills; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

In the annexed drawings, making part of this specification, A, B, and C represent three platforms, which are placed a suitable distance apart, and connected by means of the four posts D D at their corners. E represents a wind-wheel, which may be made with straight buckets, *a a*, or they may be curved, and set at any suitable angle. F represents the shaft of this wheel, said shaft having one bearing in the upper platform, C, and one in the lower one, A. G G represent a series of slats, which are pivoted at the centres of each of their ends, at equal distances apart between the platforms B and C, and in a circle around the wheel E'. These slats are all connected together by a series of rods; H H, as represented, so that when one partially revolves upon its pivots, all of the balance have the same motion. These slats are so arranged that, when they are turned upon their pivots in the direction of the arrows, Figure 1, their outer ends lap the inner ends of the slats next to them, and thus close the wind-passages to the wheel. When these slats are opened, as seen in fig. 1, the wind has a free passage between them to the wheel E. N represents a governor-shaft, which stands in a vertical position, having bearings in the platforms A and B, as seen. P P represent the usual governor-arms, with pawls upon their outer ends, and their inner ends pivoted to the shaft N. *e e* represent connecting-bars, their upper ends being pivoted to the arms P P, and their lower ends to a sliding collar, O. *d* represents a belt, which passes around a pulley on the shaft F, and then around one on the governor-shaft N. L represents a lever, forked at one end, so as to embrace the collar O, being pivoted at this forked end to said collar. The lever L has its fulcrum in the upright, M, and to its outer end connects a rod, K, which connects it to one end of an elbow-lever, J, said lever J having its fulcrum in a slot in the platform B. A rod, I, connects the upper end of lever J to the series of rods H, which connect the slats together. The object of this arrangement is to control the air-passages to the wheel by opening or closing the slats G G.

It will readily be seen that when the wind-wheel revolves, its shaft, through band *d*, gives motion to the governor-shaft N, and that the more motion is given to this shaft, the nearer will the balls of arms P and the arms themselves be thrown toward a horizontal plane, through their points of connection with the shaft. As the arms P rise, so does the collar O. This collar, operating the lever L, causes it, through its connections, to operate upon the slats G G, closing them when the wheel E runs at a high-rate of speed, and opening them as this speed is diminished, thus regulating the amount of wind which passes to the wheel E according to the required speed.

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

The arrangement of the platforms B C and wheel E with the shutters G G, connected together by the fastenings *q q* and rods H H, and combined with a governor, substantially as and for the purposes set forth.

In testimony that I claim the foregoing, I have hereunto set my hand, this 6th day of June, 1867.

ALBERT H. SOUTHWICK.

Witnesses:

ROBT. KISSICK,
Y. B. WILSON.