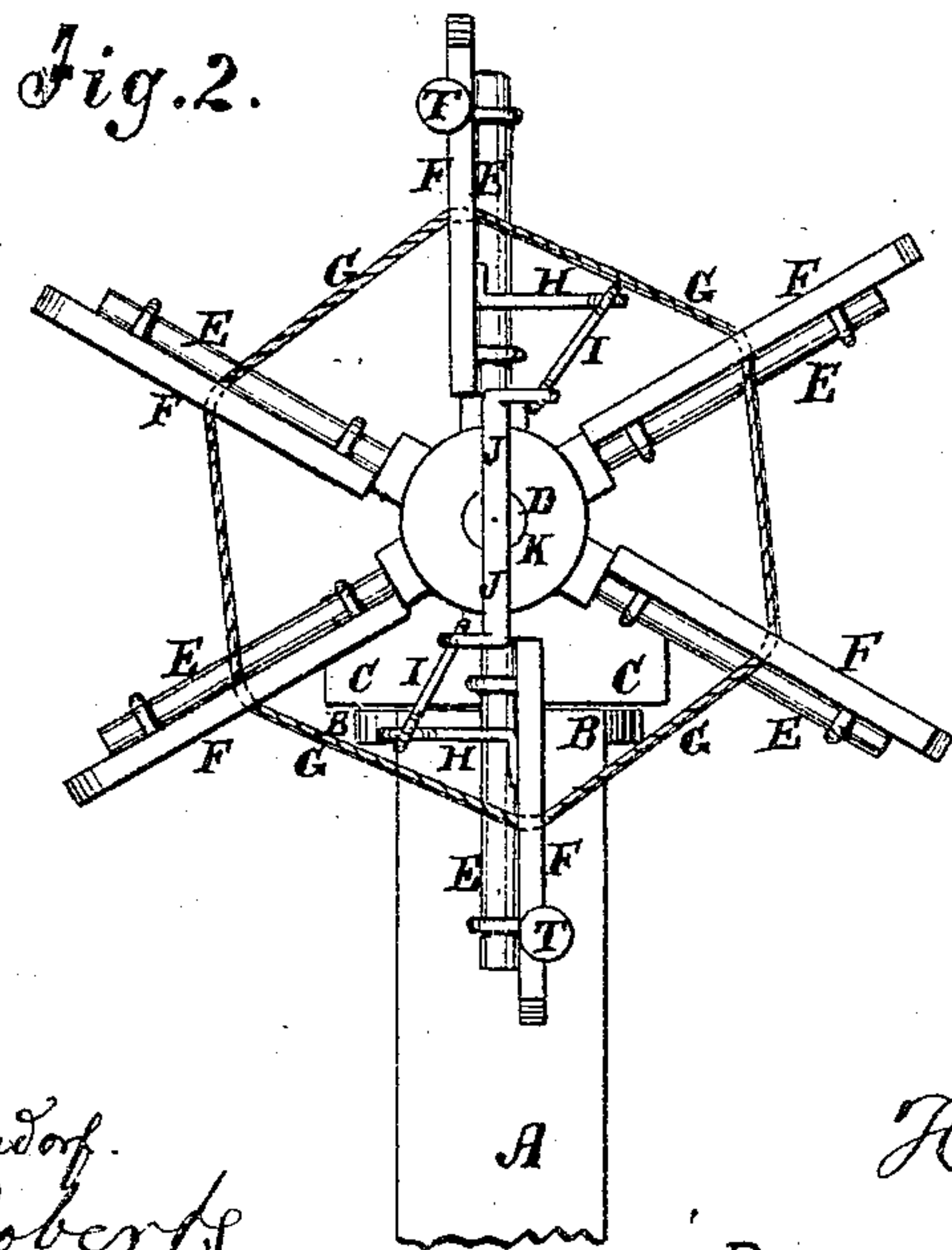
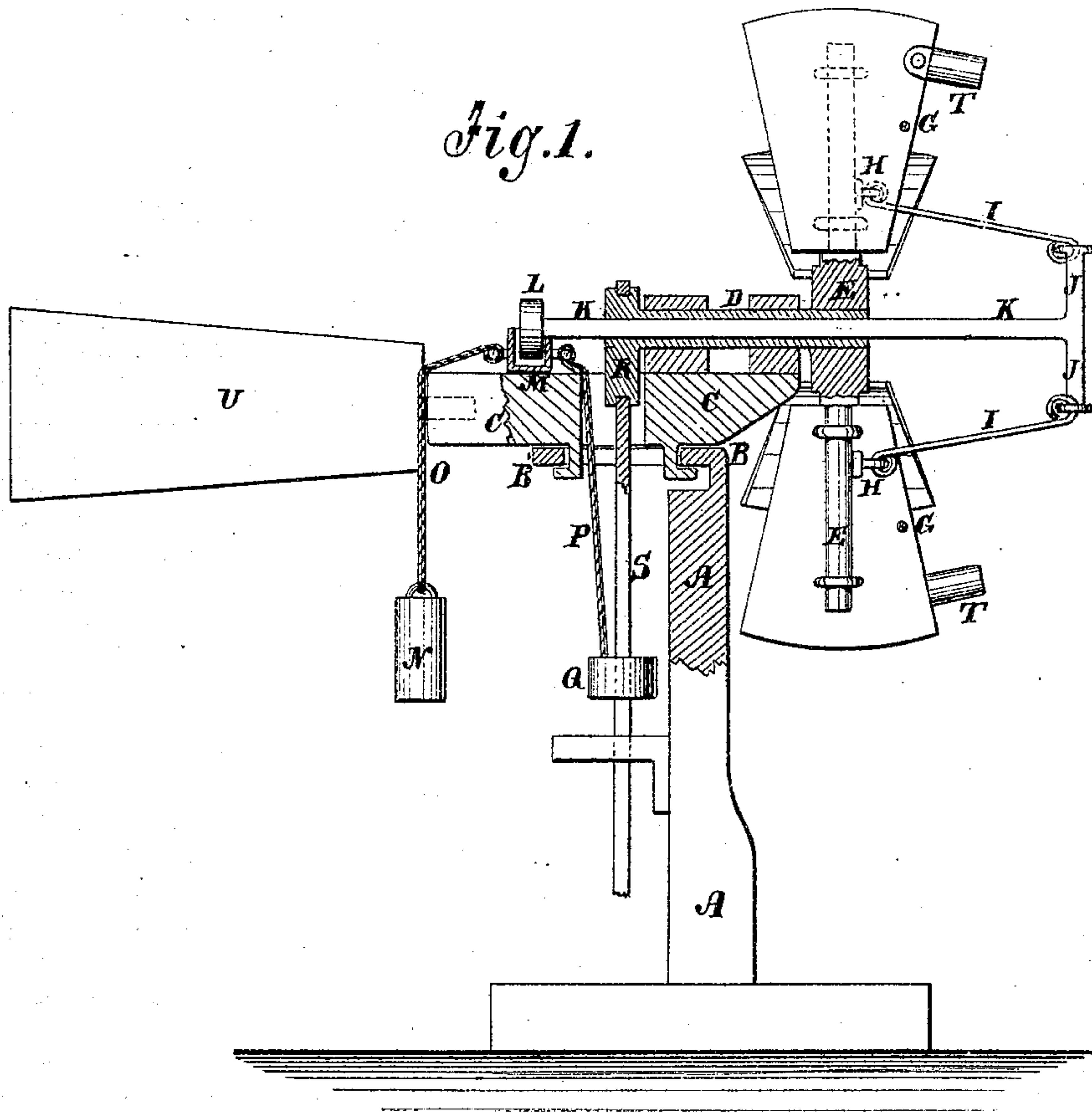


H. J. CAMPBELL.
Wind-Wheel.

No. 127,460.

Patented June 4, 1872.



Witnesses:

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PER

UNITED STATES PATENT OFFICE.

HENRY J. CAMPBELL, OF VIRGINIA, ILLINOIS.

IMPROVEMENT IN WIND-WHEELS.

Specification forming part of Letters Patent No. 127,460, dated June 4, 1872.

Specification describing a new and Improved Wind-Wheel, invented by HENRY J. CAMPBELL, of Virginia, in the county of Cass and State of Illinois.

Figure 1 is a side view of my improved wind-wheel, partly in section to show the construction. Fig. 2 is a front view of the same.

Similar letters of reference indicate corresponding parts.

My invention has for its object to furnish an improved wind-wheel, designed especially for operating a pump, and which shall be simple in construction, reliable in operation, and not liable to get out of order; and it consists in the construction and combination of various parts, as hereinafter more fully described.

A represents the tower that supports the operating parts of the wheel, and to the top of which is attached a bed-plate, B, having a circular hole formed through it. C is the base-plate or frame of the wheel, which rests and turns upon the plate B, with which it is connected, and to which it is pivoted by hook-flanges or bolts formed upon or attached to the said plate or frame C, and which pass through the hole in the bed-plate B and overlap the under side of said plate. D is the wheel-shaft, which is made hollow, and revolves in bearings attached to the upper side of the base plate or frame C. To the forward end of the hollow shaft D are rigidly attached six (more or less) radial arms, E. F are the wings of the wheel, which are connected and pivoted to the arms E by sockets or keepers, so that they may be turned with their edges more or less directly toward the wind, as may be desired. The forward edges of the wings F are connected by ropes or chains G, as shown in Fig. 2, so that they may all move together. To the rear sides of the two opposite wings F are rigidly attached short arms H, to the outer ends of which are pivoted the rear ends of two connecting-rods, I, the forward ends of which are pivoted to the ends of the cross-bar or arms J attached to or formed upon the forward end of the rod K. The rod K passes back through the hollow shaft D, and to its rear end, which projects beyond the rear end of the hollow shaft D, is attached or upon it is formed a disk, wheel, or flange, L, which enters a groove or

slot in the plate M, so that by sliding the said plate to the front or rear the rod K can be operated to adjust the wings F, as may be required. The plate M is held back, to expose the side surface of the wings F to the wind, by a weight, N, suspended from said plate by a rope or chain, O. The plate M is drawn forward, to turn the edges of the wings F toward or to the wind, to regulate the velocity or stop the motion of the wheel, by a rope, P, attached to the said plate M. Q represents a bucket, which is designed to be attached to the rope P, and suspended by said rope in such a position as to receive the overflow from the trough, tank, or other receiver, so as to draw the plate M forward and stop the wheel when the said receiver becomes full. To the rear end of the hollow shaft D is attached or upon it is formed an eccentric or cam-wheel, R, with which the pump-rod S is connected by a strap or other convenient means, so that the pump may be operated by the revolution of said hollow shaft. The velocity of the wheel may be governed in high winds by weights T attached to the forward edges of the wings F, to which the arms H are attached, and which tend to turn the edges of the wings F toward the wind. U is the vane by means of which the wheel is held to the wind, and which is attached to the rear end of the plate or frame C.

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

1. The hollow shaft D, rigid arms H, connecting-rods I, cross-bar or arms J, rod K, flange, disk, or wheel L, sliding plate M, rope and weight O N, and rope P, in combination with the arms E, wings F, and pivoted base-plate or frame C, substantially as herein shown and described, and for the purpose set forth.

2. The combination of the weights T with the forward edges of the wings F, to which the arms H are attached, substantially as herein shown and described, and for the purpose set forth.

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