G. S. OBERDORFF.

Wind-Wheel and Gearing

No. 127,704.. Patented June 11, 1872.

Fig. 1

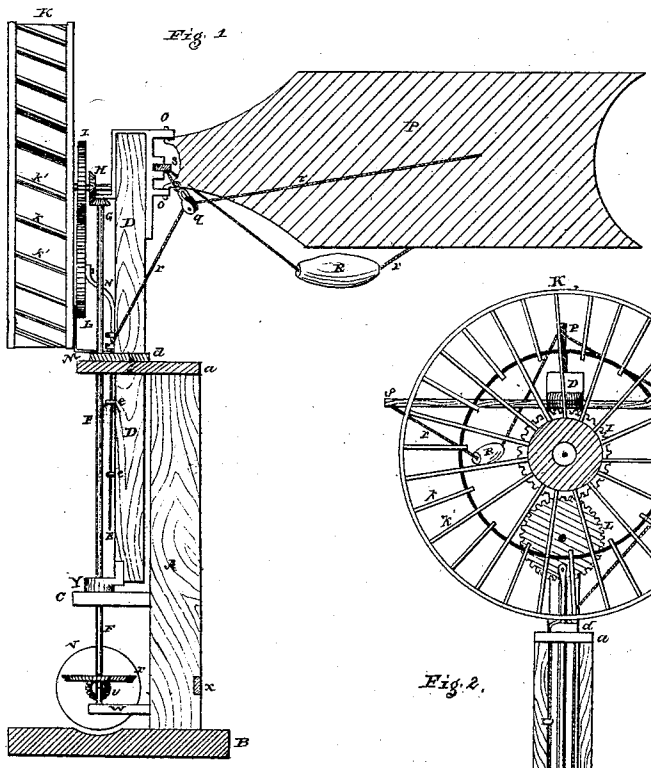
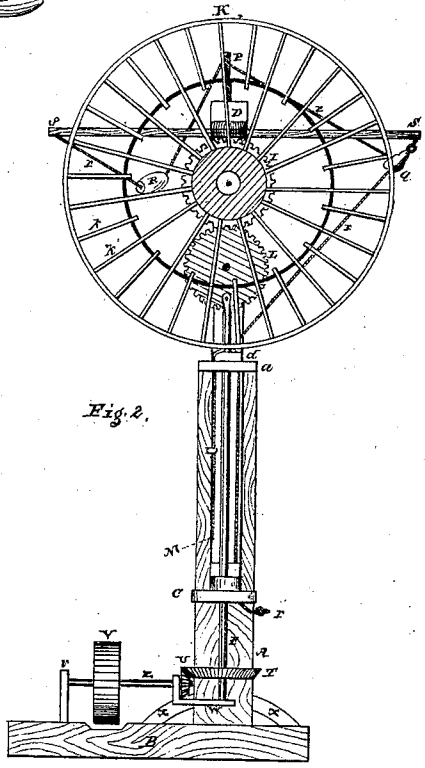


Fig. 2.



Witnesses.

Henry C. Stauffer.

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Inventor.

George S. Oberdorff

per J. Stauffer Atty

UNITED STATES PATENT OFFICE.

GEORGE S. OBERDORFF, OF LOWER WINDSOR, PENNSYLVANIA.

IMPROVEMENT IN WIND-WHEELS AND GEARINGS.

Specification forming part of Letters Patent No. 127,704, dated June 11, 1872.

To all whom it may concern:

Be it known that I, GEORGE S. OBERDORFF, of Lower Windsor township, in the county of York and State of Pennsylvania, have invented certain Improvements in Wind-Wheels and Gearing; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification.

The nature of my invention relates to the arrangement of the wind-wheel and gearing in connection with a vertical revolving support combined with a fixed vertical post, so that the upper gear revolves with the wind-wheel and operates the gearing below in fixed bearings connected with the stationary support and base.

Similar letters of reference indicate corresponding parts.

Figure 1 is a side view to show the vertical shaft which operates the lower gear, and receives motion by the revolution of the wind-wheel. Fig. 2 is a front view of the same.

A is an upright fixed post, braced by *x* to the base B. At C there is a projecting table, perforated for a vertical shaft, F. This table C supports another vertical revolving post or support, D, on an annular foot-piece, Y, which post D has a circular collar, *d*, and is held in an annular table, *a*, on the top of the fixed post A, in which it revolves as the wind-wheel K turns or shifts its direction, which wind-wheel K has its bearing in said support or post D, the shaft of which has a cogged wheel, I, and bevel-pinion, H. This bevel-pinion H gives motion to a bevel-pinion, G, on the top of a vertical shaft, F. Said shaft has its bearing in a bracket attached to the post D above, and extends down said post through the collar *d* and annular top *a* on the fixed post A, and through the perforation of the supporting-table C to a step, W, attached, as shown, with its cogged wheel T, which drives a beveled pinion, U, on a horizontal shaft, Z, also provided with a belt-pulley, V, forming the lower gear. The wind-wheel K has its wings *k'* set obliquely, so as to catch the wind, with short intermediate wings *k*, seen in Fig. 2. There is a cogged wheel, L, under the wheel I aforesaid. This wheel L has its bearing in a bracket, N, attached to the post D, and is also provided with a pin for a crank-connection to a rod, M, held and sliding up and down in staples *e* attached to the said post D, by the means of which motion can be had for stamping, cutting, or performing work disconnected from the lower gearing. The vane P is hinged in bearings O on the upper portion of the revolving post D. This bearing has also brackets or flanges for supporting a cross-bar, S, on one end of which cross-bar is a pulley, *q*, for a cord, *r*, which is attached to one side of the vane P, and passing through eyed staples on the post D to the under side of the support C on the fixed post A, terminating with a ring or hook to place it over a pin to support it. By the means of this cord-connection the vane can be drawn with its edge to the wind, and the motion of the wind-wheel arrested. To restore the vane to the action of the wind there is another cord from the opposite end of the cross-bar S, with a weight, R, on said cord, which is connected with the opposite side of the vane P, and of a sufficient weight to draw the vane to its proper position, the hinge being so formed as to arrest its motion when at right angles to the wind-wheel K, and the cord released by which the vane is drawn in. Thus, as in the well-known action of the vane and wind-wheel, it adapts itself to and veers with the wind. While thus turning to the right or left, or clearly around, carrying with it the upper gearing, the vertical shaft F is so centralized that it does not change its action on the lower gearing, which receives the same motion in their fixed bearings in whatever position the vane may bring the wind-wheel, and the upper gear-wheels connected with said shaft F.

I am aware that wind-wheels are common, and operate a variety of devices for mechanical purposes, to utilize the wind as a motor; but I am not aware of any arrangement ever used substantially as herein set forth and shown, operating a crank-rod vertically and belt-pulley to connect with other machinery, combined with a fixed and revolving support, in the manner specified.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The arrangement of the cogged and bevel gear I H L G, crank-connection M, and vertical shaft F, operated by the motions of the wind-wheel K, in combination with the revolving and supporting post D on its perforated foot-piece Y, and sustained by the perforated table C, and so as to impart motion to the gear T U and pulley V in their respective bearings, constructed and operated substantially in the manner and for the purpose specified.

2. In combination with the revolving post D and bearings O, I claim the hinged vane P, cross-arm O, cords *r*, weight R, all arranged and operating substantially in the manner and for the purpose described.

GEORGE S. OBERDORFF.

Witnesses:
GEORGE LIEBHART,
SAMUEL GILBERT.