

G. S. STRONG.
WIND-MOTOR.

No. 175,199.

Patented March 21, 1876.

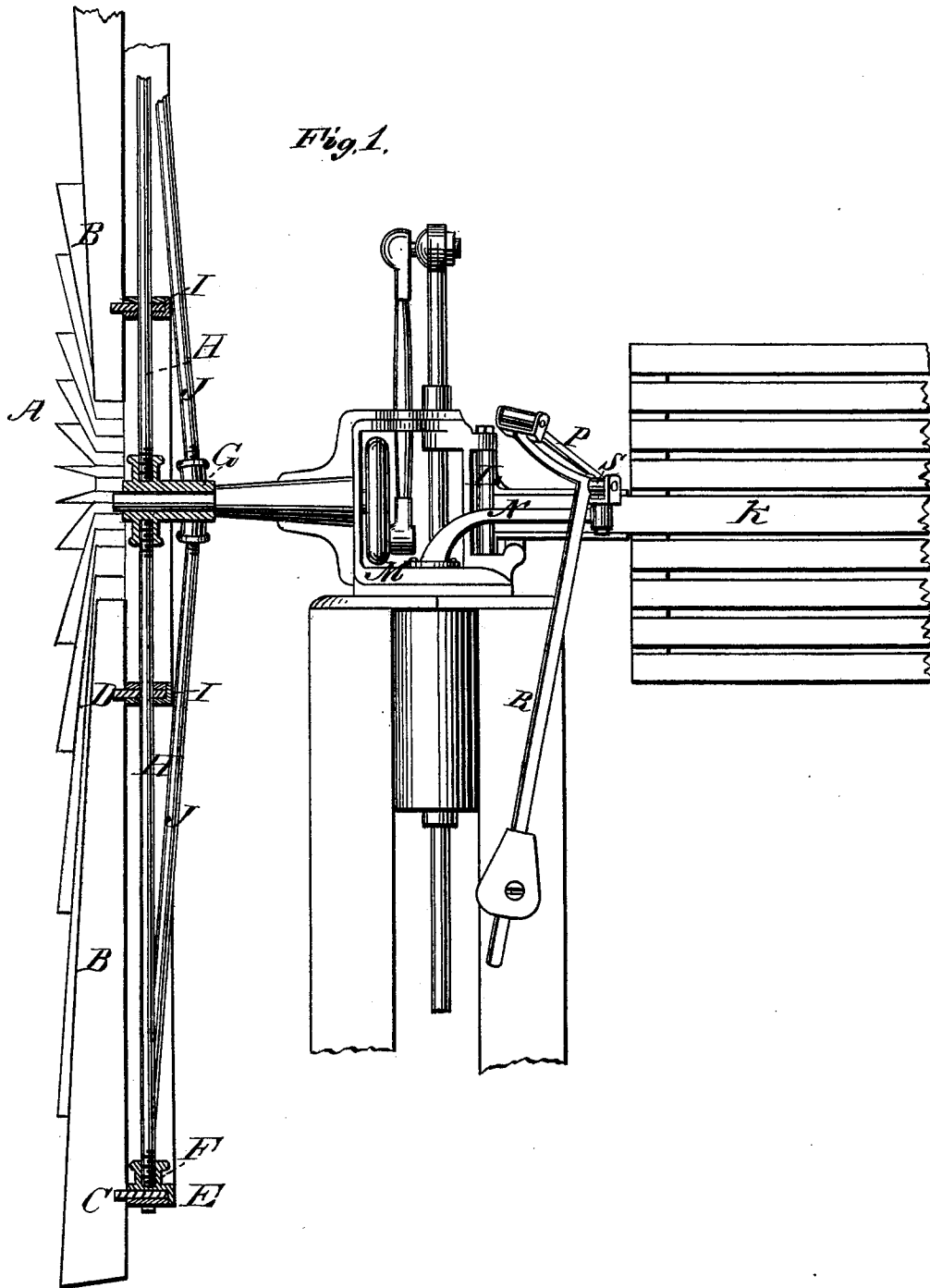


Fig. 1.

WITNESSES

E. H. Bates
George W. Rogers

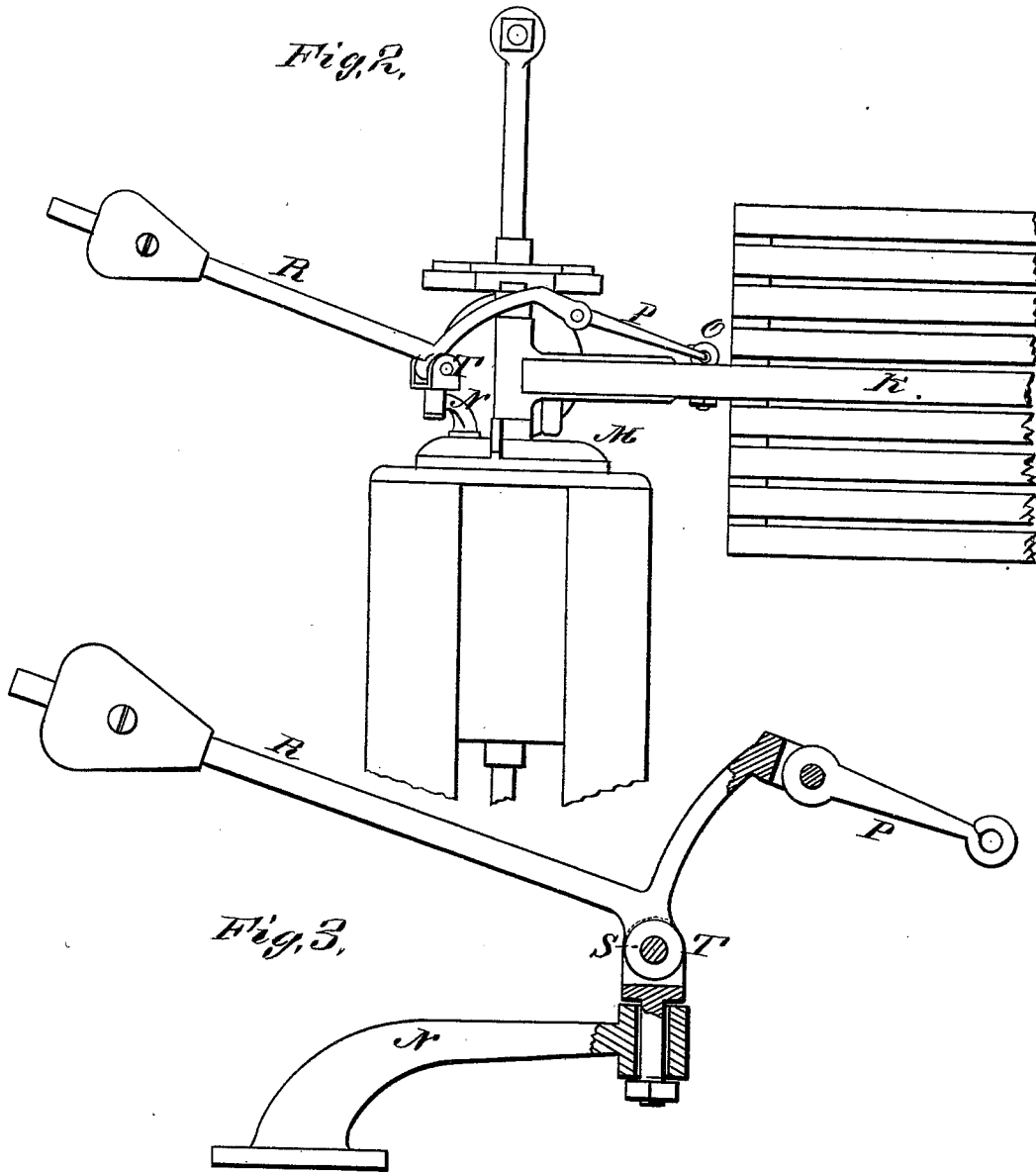
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Fig. 4.

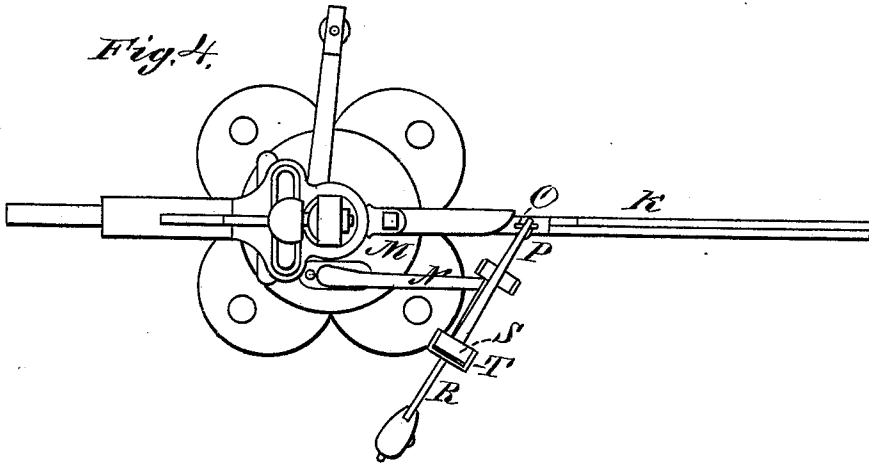


Fig. 5.

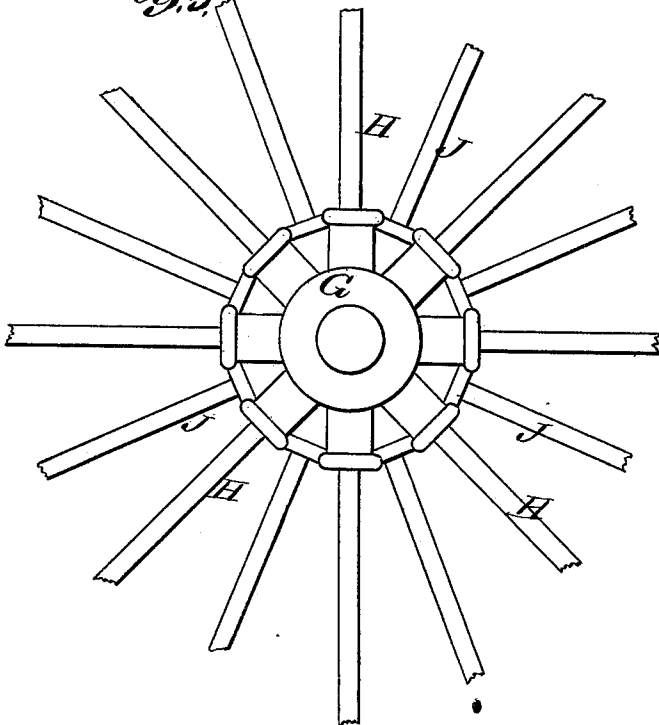
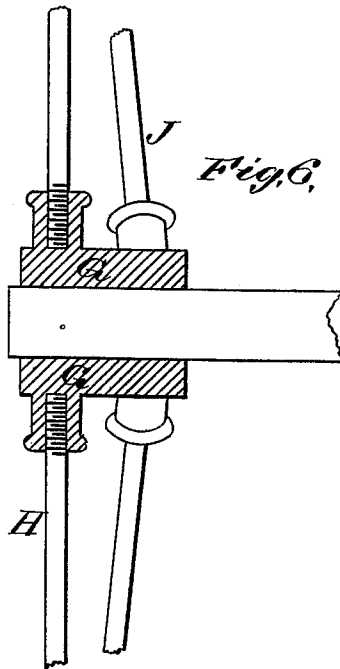


Fig. 6.



WITNESSES

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UNITED STATES PATENT OFFICE

GEORGE S. STRONG, OF SPRINGFIELD, OHIO.

IMPROVEMENT IN WIND-MOTORS.

Specification forming part of Letters Patent No. **175,199**, dated March 21, 1876; application filed February 26, 1876.

To all whom it may concern:

Be it known that I, GEORGE S. STRONG, of Springfield, in the county of Clarke and State of Ohio, have invented a new and valuable Improvement in Wind-Motors; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a longitudinal vertical section of my wind-motor, and Figs. 2, 3, 4, 5 and 6, are detail views thereof.

My invention relates to improvements in wind-mills, and one of the objects of my invention is to provide a governor which, when at rest, will be near the point to which it is connected to the vane, and which, when the vane swings on its hinge, will afford direct and equal resistance to the wind at every point without any side draft; and to this end my invention consists, first, in the application to a hinged vane of a lever provided with a weight, the lever being pivoted on a swiveled fulcrum.

My invention further consists in the employment of a wind-wheel of peculiar construction, and it also consists in certain details of construction, hereinafter more fully set forth.

In the accompanying drawings, A is the wind-wheel, the blades B of which are attached to the rims C D in the usual manner. E is a clamp embracing the outer rim C and securely attached thereto. The lower face of the clamp E is provided with a screw-threaded tube, F. G is a head, fitting over the wheel-shaft, and provided with two sets of screw-threaded tubular projections, the whole being preferably cast in one piece. H are arms, screw-threaded at both ends, the upper ends of which are screwed into the tubular projections of the clamps F, embracing the outer rim. These arms thence pass through the inner rim D and are screwed into the tubular projections on the head G. The clamps I are then slipped over the inner rim embracing the arms H, and are secured thereto. J are arms screwed into the inner tubular projections on the head, and also into the tubular projections on the clamp

E. The arms H and J alternate with each other, the latter not being attached to the inner rim. By this construction the wheel is securely braced, resembling closely a solid one, and all the shrinkage is obviated. K is a vane pivoted at its inner end by means of the vertical shaft, L, having its bearings in brackets attached to the turn-table M. N is a bent arm attached to the turn-table, and projecting rearwardly therefrom, the upper part of which lies parallel with the vane. O is a hook attached to the vane-shaft, to which is attached the link P, pivoted at its outer end to the arm Q, the lever R provided with a sliding weight. The lever is attached to roller S, which has its bearings in the rectangular frame T, which is pivoted on the outer end of the bent arm N.

By this construction it will be seen that the fulcrum of the weight-lever R is swiveled, that it is near the point of attachment to the vane when at rest, and that as the vane operated by the wind swings on its hinge, a direct and equal resistance is attained, and all side draft on the fulcrum obviated by reason of its swiveled construction.

The mechanism to operate the pumps is of the usual construction.

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

1. The combination of a governor pivoted on a swiveled fulcrum, substantially as set forth.

2. A wind-wheel, consisting of arms H screwed into the head and also into the outside clamp E, the inside clamps I on the rim D, with auxiliary or bracing arms J screwed into the head and outside clamp E.

3. The clamp E, provided with a screw-threaded tubular projection, substantially as described, and for the purposes set forth.

4. The head G, provided with screw-threaded tubular projections, substantially as and for the purpose set forth.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

GEORGE S. STRONG.

Witnesses:

JOHN F. ACKER, JR.,
GEORGE W. LARNER.