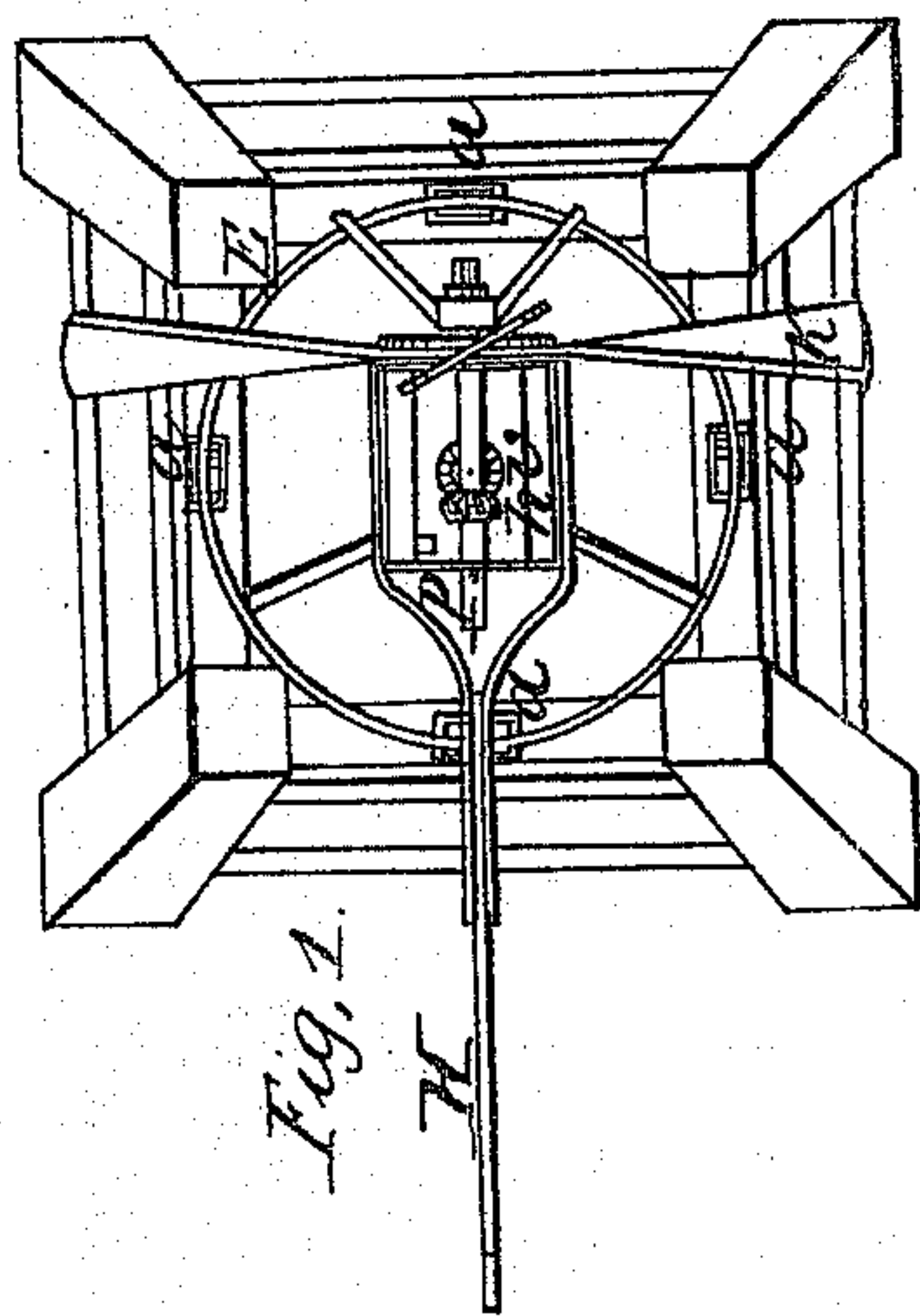
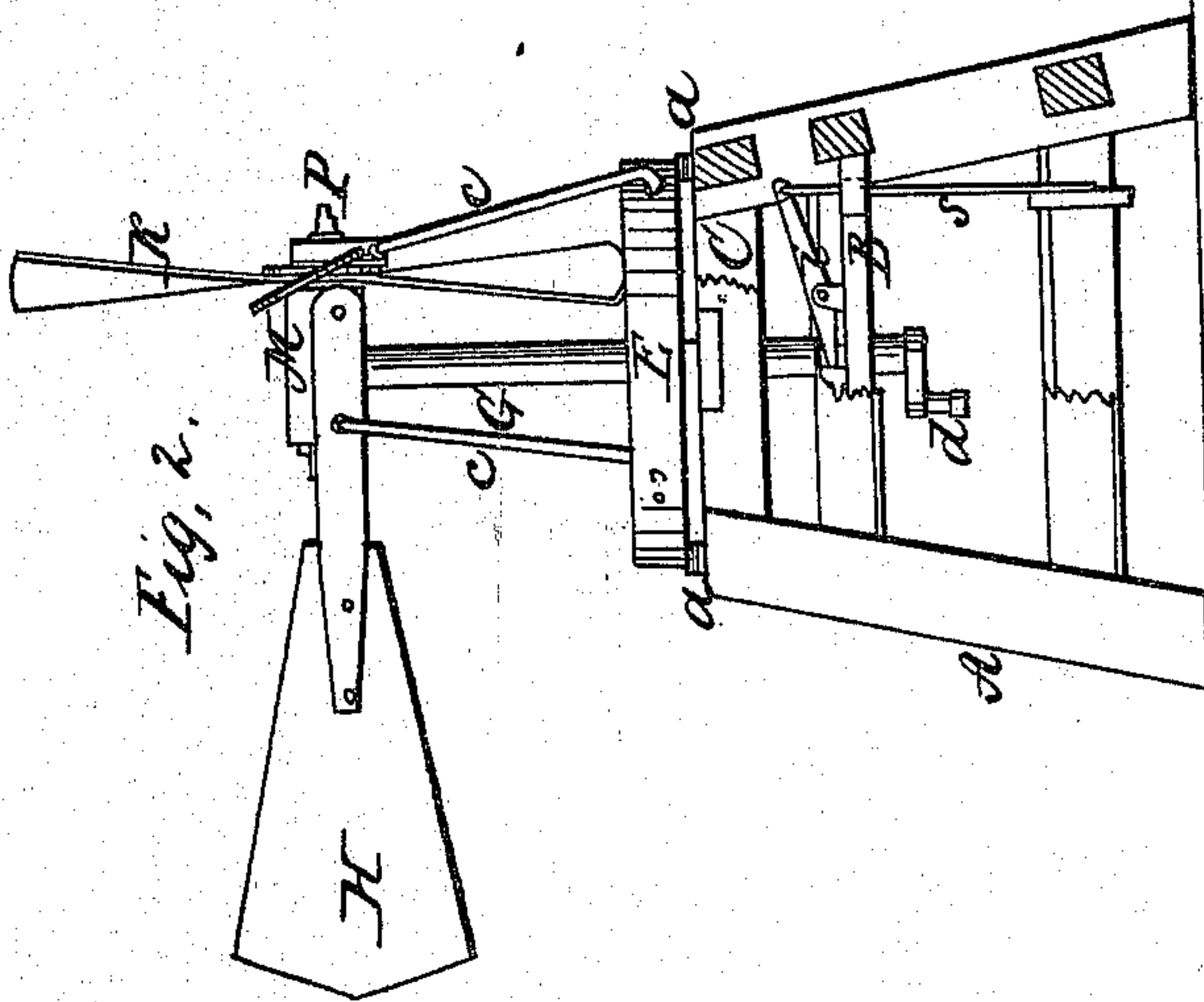
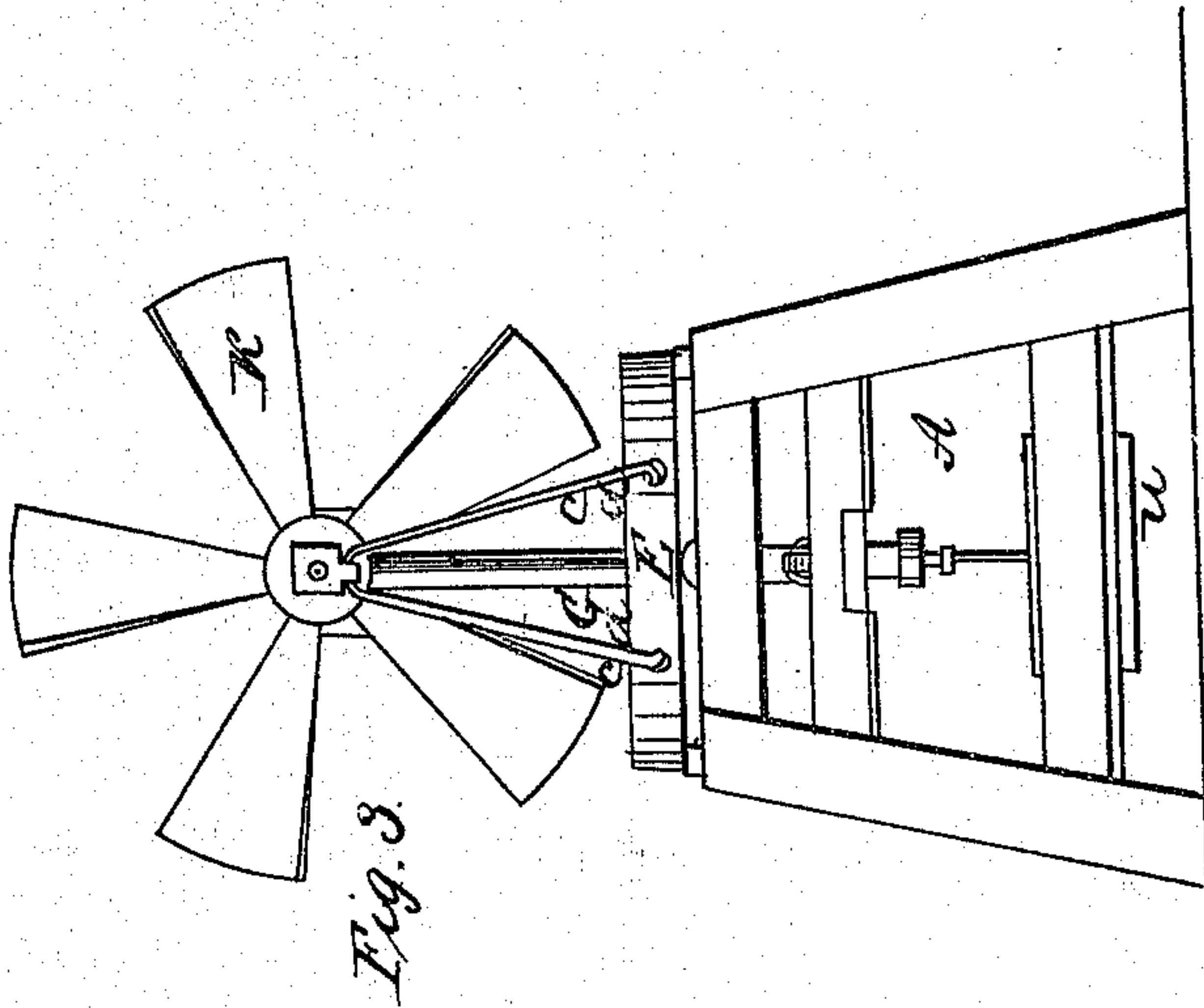


*G. W. Darby.*

*Wind Wheel.*

*N<sup>o</sup> 87,646.*

*Patented Mar. 9, 1869.*



*Witnesses,  
J. B. Smith  
Attorney.*

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# United States Patent Office.

G. W. DARBY, OF NEW VIENNA, OHIO.

Letters Patent No. 87,646, dated March 9, 1869.

## IMPROVEMENT IN WIND-WHEEL WATER-ELEVATORS.

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, G. W. DARBY, of New Vienna, in the county of Clinton, and State of Ohio, have invented a new and valuable Improvement in Water-Elevators; 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 plan view of my device.

Figure 2 is a side view, and

Figure 3 is an end view thereof.

My invention relates to that class of devices in which wind is used as a motor for raising water; and

It consists mainly in novel means for placing the working-machinery in and out of gear, the object being to promote economy and provide against a waste of water.

The letter A of the drawings represents a frame, to be set immediately over the well or spring.

Letter B is a cross-bar, adjusted in the side-beams of said frame, as shown; and

Letter C is a cross-bar, placed on the top of the frame.

Letters *a* are friction-rollers, arranged in the top of frame A, and serve as wheels, upon which the ring E revolves, as hereinafter mentioned.

Letter E is a revolving ring, resting upon the rollers *a*, and united, by rods *c*, with the parts connected with the vane, in the manner represented.

The letter G is an upright shaft, with a crank, *d*, at its lower end, and a small bevelled pinion, *h*, on its top, as shown.

The lever *i* sustains this shaft, near its lower end, at the point where it passes through the cross-bar B, and serves as a means for raising or lowering the same.

This lever *i* is adjusted on cross-bar B, by a hinge or staple, as shown.

Its front end is formed in the shape of jaws, that clasp partly around the shaft G, and its rear end is united with the rod *s*, as shown.

The rod *s* is united, at its top, with the rear end of lever *i*, and its lower end is connected with the float *u*, as represented.

The float *u* is a box or block, that sets in the water-tank, is firmly connected with the rod *s*, and operates therewith, and with the water in the tank, to throw

the working-machinery in and out of gear, as herein-after specified.

The letter H is the vane of the windmill, and

Letters K are the fans.

Letter M is a box, to which the vane is attached, in the manner shown, and is supported and held in place by means of the rods *c*, as represented.

The letter P is a horizontal shaft, that passes through the box M, and has its arbors in the ends thereof, as shown.

Letter *v* is a small bevelled pinion, attached to said shaft P, that meshes and operates with the pinion *h*, on the shaft G.

The fans of the mill are adjusted on shaft P, outside the box M, at the point and in the manner represented; and it is held in place by the washer or ring *y*, in the manner shown.

My elevator operates as follows, to wit:

When the water in the tank is low, and needs replenishing, the float *u* draws down the rod *s*, which, in turn, actuates the lever *i*, and, in connection therewith, raises the shaft G, and places the pinion *h* in gear with pinion *v*, and the machinery is set in motion.

The crank *d* is connected with and operates a force-pump, by means of which, when the machinery is in gear, water is forced into the tank, until it is nearly or quite filled.

When the water has reached the height in the tank for which the mechanism has been adjusted, the float, operating through the devices connected therewith, serves to drop the shaft G to such a point that the pinions *h* and *v* cease to work with each other, and allow the fans to revolve without rotating shaft G, and consequently the pumping-process is discontinued, to be resumed in the manner above stated.

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

The float *u*, in combination with rod *s*, lever *i*, shafts G and P, and pinions *h* and *v*, constructed and operating substantially as and for the purposes herein specified.

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

G. W. DARBY.

Witnesses:

HENRY A. SHEPHERD,  
W. H. HAGUE.