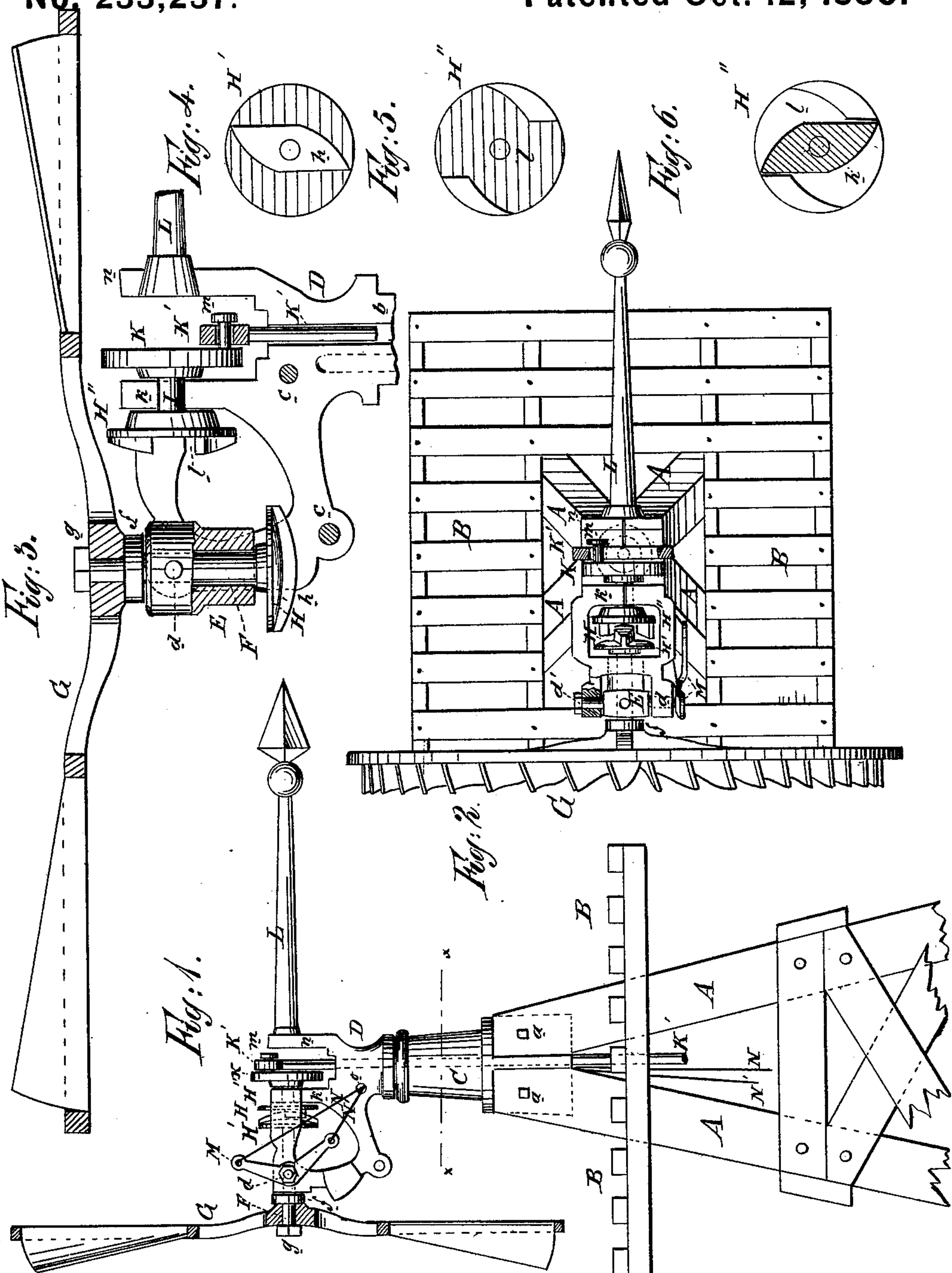


(Model.)

A. W. HAAG.  
Windmill.

No. 233,237.

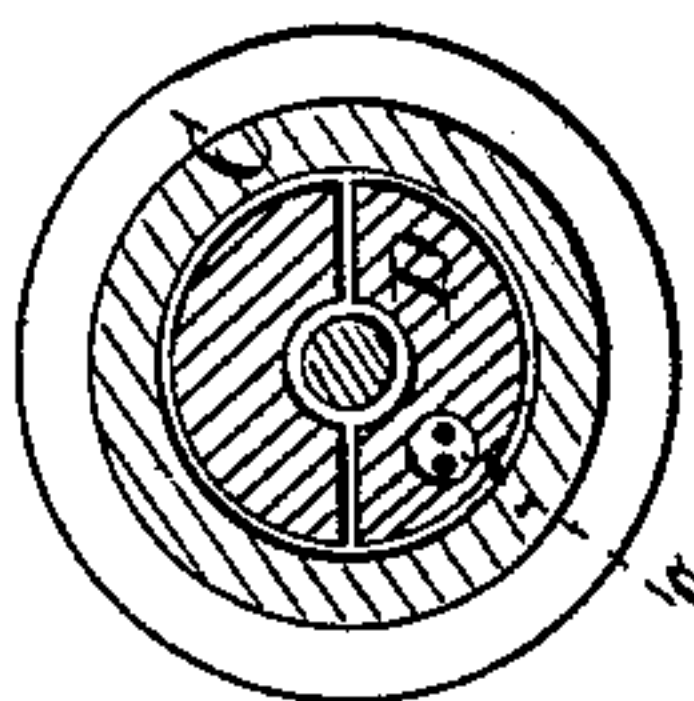
Patented Oct. 12, 1880.



WITNESSES:

*Chas. Nida*  
*G. Bedgwick*

*Fig. 7.*



INVENTOR:

*A. W. Haag*

BY

*Munn & Co.*

ATTORNEYS.



# UNITED STATES PATENT OFFICE.

ADAM W. HAAG, OF FLEETWOOD, PENNSYLVANIA.

## WINDMILL.

SPECIFICATION forming part of Letters Patent No. 233,237, dated October 12, 1880.

Application filed July 26, 1880. (Model.)

*To all whom it may concern:*

Be it known that I, ADAM W. HAAG, of Fleetwood, in the county of Berks and State of Pennsylvania, have invented a new and Improved Windmill, of which the following is a specification.

The object of this invention is to provide an improved device whereby the wind-wheel may be thrown from a vertical to a horizontal position.

The invention consists in journaling the horizontal axle of the wheel in a box that swings on trunnions and is adjustable in a vertical plane; and, further, in a peculiar coupling device for connecting the wheel-axle with the pump-rod.

Figure 1 is a partly sectional vertical elevation of the device applied to a windmill. Fig. 2 is a partly sectional plan of the same. Fig. 3 is an enlarged partly sectional elevation of portions of the device, showing the wind-wheel in a horizontal position. Fig. 4 is an enlarged elevation of the face of the male part of the coupling. Fig. 5 is an enlarged elevation of the face of the female part of the coupling. Fig. 6 is an enlarged elevation, showing the engagement of the two parts of the coupling. Fig. 7 is a transverse section on line *xx*, Fig. 1.

Similar letters of reference indicate corresponding parts.

In the drawings, A represents the standards or supporting-frame, and B the platform extending laterally about the frame A.

C is the thimble, fastened by bolts *a* in the top of the frame A, and D represents the head-block, supported in position by the entrance of its hollow shank *b* vertically into the said thimble C. Said head-block D is herein shown as being made in two parts united by bolts *cc*, but I do not confine myself to this style of construction.

In the upper and forward angle of the head-block D a swinging journal-box, E, is pivoted on the transverse pins or trunnions *d d'*, so that it—the said box E—may freely move in a vertical plane, the head-block D being shaped and designed to permit such movement.

The box E holds the horizontal axle F of the wind-wheel G, which is held between a collar, *f*, and a terminal nut, *g*, on said axle F. This axle F extends rearward and has on that end,

close to the rear end of the box E, the male part H' of the coupling H, which part H' consists of a disk of metal having a diamond-shaped lug, *h*, projecting centrally from its rear face.

In the upward-projecting lug *h* of the head-block D the horizontal shaft I is journaled, and carries on its forward end the female part H'' of the coupling H, which part consists of a disk of metal having an irregular-shaped depression, *l*, for the reception of the lug *h* of the part H' of the coupling, so that when the parts are coupled together and the wind-wheel G in operation the lug *h* is engaged in the depression *l*, as shown in Fig. 6, the straight edge of the lug *h* bearing on either side against the straight shoulders *l'* of the opposite part, H'', of the coupling, while the depression *l* is of such shape and dimensions as to permit a ready uncoupling of the parts H' H'' when the wheel G is in motion. On the rear end of this shaft I is keyed an eccentric, K, on whose projecting pin *m* is suspended the rod K', that passes down through the thimble C and serves as a pump-rod or to transmit motion to other mechanism.

In the rearmost upper projecting lug, *n*, of the head-block D is fixed the rearward-projecting horizontal staff L.

On the projecting end of the trunnion *d* the crank M is firmly fastened, and to either arm of said crank M a wire, N N', is made fast and passed down through the orifice *o* in the head-block D and through the thimble C, within reach of the operator.

When the coupling H is in the position shown in Fig. 6—with the diamond-shaped lug *h* in a vertical position—a pull on the wire N, that is fast to the upper arm of the crank M, will turn the journal-box E on its trunnions *d d'*, and thereby raise the wind-wheel G to the horizontal position shown in Fig. 3, thus spilling the wind out of its sails and disconnecting said wheel G from the rod K, and thereby stopping its further movement; and when it is desired to put the mill in operation again a pull on the wire N' will bring the wheel G to its primary vertical position and the parts H' H'' again coupled.

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

1. A wind-wheel constructed substantially as herein shown and described, consisting of standard A, head-block D, pivoted journal-box E, trunnions  $d d'$ , axle F, carrying wind-wheel  
5 G, and part H' of coupling H, shaft I, carrying part H'' of coupling H, and eccentric K, provided with pin  $m$ , rod K', crank M, and wires N N', as set forth.

2. The combination, with the wind-wheel G  
10 and shaft I, of the head-block D, axle F, pivoted box E, coupling H, trunnions  $d d'$ , and crank M, substantially as herein shown and described, whereby the said wheel may be ad-

justed in a vertical or horizontal plane, as set forth.

3. In a windmill, the combination, with the  
15 wind-wheel axle F and shaft I, of the coupling H, consisting of part H', provided with a diamond-shaped lug,  $h$ , and of part H'', having a depression,  $l$ , substantially as herein shown and  
20 described.

ADAM W. HAAG.

Witnesses:

JNO. H. KINTZER,  
LEVI BENNTHUSE.