(No Model.)

C. O. WEIDMAN.

WIND ENGINE.

No. 260,435. Patented July 4, 1882.

Fig. 1.

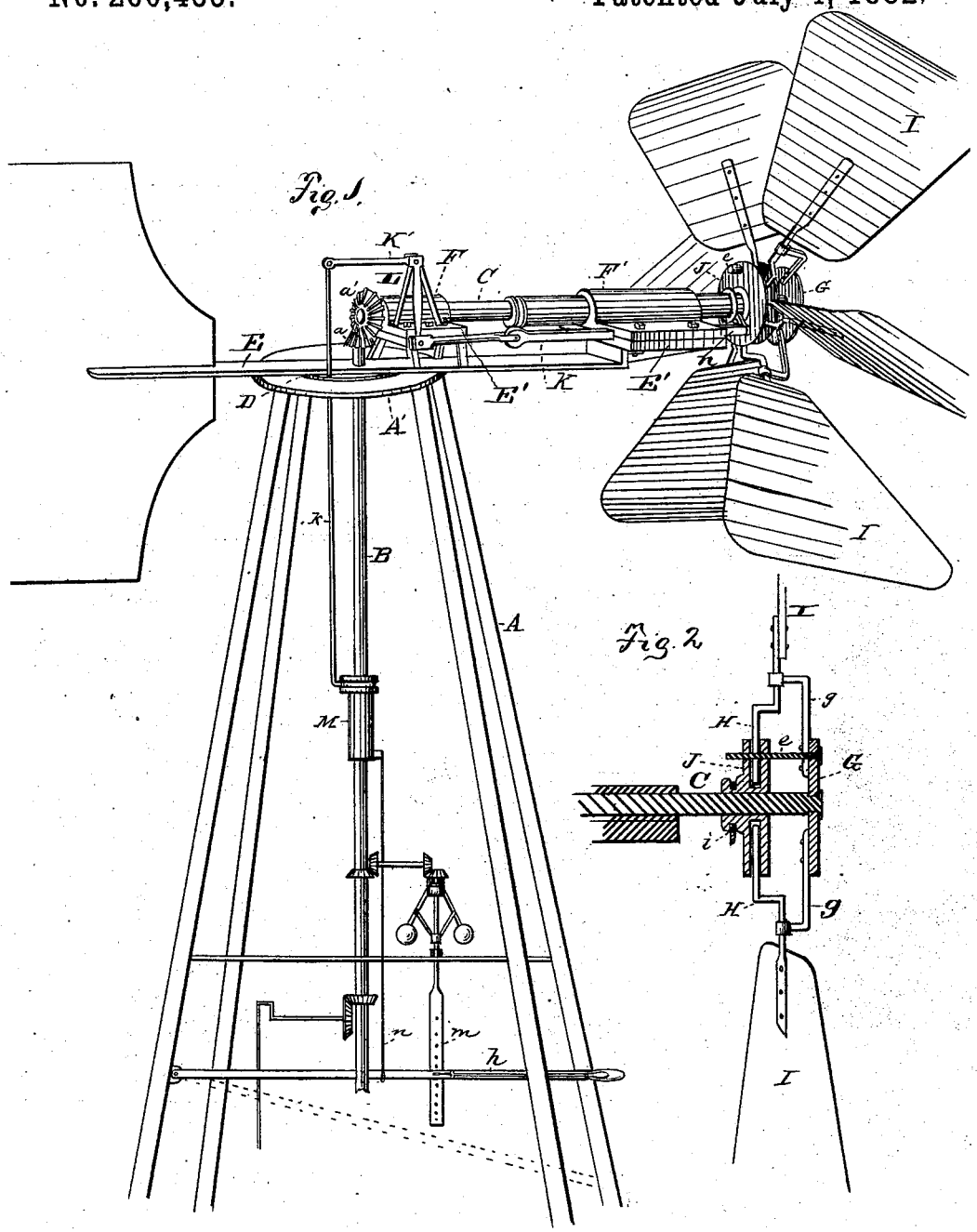

Fig. 2.

WITNESSES

W. Engel

A. E. Lynch

Charles O. Weidman.
INVENTOR

By Seymour & Seymour
his ATTORNEYS

UNITED STATES PATENT OFFICE.

CHARLES O. WEIDMAN, OF POE, OHIO.

WIND-ENGINE.

SPECIFICATION forming part of Letters Patent No. 260,435, dated July 4, 1882.

Application filed February 24, 1882. (No model.)

To all whom it may concern:

Be it known that I, CHARLES O. WEIDMAN, of Poe, in the county of Medina and State of Ohio, have invented certain new and useful Improvements in Wind-Engines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same.

My invention relates to wind-engines so constructed that the angle of the wings may be changed by means of mechanism connected with a suitable governor, the parts and combination of parts of which will be more fully hereinafter described, and pointed out in the claims.

In the drawings, Figure 1 represents a view of my device in perspective, showing a ball-governor connected with it to regulate the angle of the wings or sails. Fig. 2 represents a detached sectional view of the axial shaft upon which slides the collar that holds the ends of the rods that are attached to the wings of the engine.

A represents a portion of a tower. Through the bed-plate A′ of the tower passes the main shaft B, which engages with the horizontal shaft or axle C by means of the gear wheels *a a′*. Upon the shaft B slides a swivel or sleeve, M. Any suitable governor may be connected with this swivel.

In the drawings is shown a ball-governor, which is operated by means of suitable gearing.

A lever, *h*, may be pivoted at one end to the tower A. The other end is adjustably attached to the governor-rod *m*. The governing influence is thus conveyed from the lever *h* to the swivel M by the rod *n*. When it is desirable to disengage the governor from the swivel the lever is pressed down, thus disconnecting the gearing.

With the above-described mechanism the engine is allowed to run at about the same rate of speed, for as the pressure of the wind on the fans increases the governor raises the swivel M on the shaft, which swings the fans out of play.

On the bed-plate A′ rests the turn-table E, to which are attached plates E′, to which are secured the boxings F F′, in which rests the shaft C. A small disk, G, is secured upon the end of this axial shaft in the usual method of wind-engines, to which are attached arms *g g*, having a tubular end, through which the rods or cranks H pass that are secured to the fans I. The ends of the cranks rest between a double disk or collar, J, that slides upon the shaft C. (Shown in section in Fig. 2.) A small rod, *e*, may be attached to the disk G and pass through the double disk J, thus preventing it from turning either way. On one side of the collar is a circular projection, having a groove, *i*, in it adapted to receive the forked end of the arm *n*, which is permanently secured to the guide K. This guide slides in the boxing F′ and connects with the arm K′, which is supported by the bracket L. A rod, *k*, connects with the arm K′, which in turn is loosely attached to the swivel M.

In operating my device the swivel is adjusted and the fans are set in motion, and in raising the swivel the edges of the fans are turned toward the breeze and stop the engine. Thus it will be seen that my mill does not need the care of watching and regulating it, as it will attend to itself under all circumstances, and in a gale of wind will present very little surface to catch the dangerous blast.

Having thus described my invention, what I claim is—

1. In a wind-engine, the combination, with the fans, of cranks secured to said fans and adapted to bear in the groove of the sliding disk, governor mechanism, and a guide-rod supported between plates, substantially as described, for operating said cranks, as set forth.

2. In a wind-engine, the combination of the double disk, provided with a grooved projection, crank H, and guide K, the latter having a forked end adapted to bear in the groove of said projection, substantially as and for the purpose set forth.

3. In a wind-engine, the combination, with shafts B and C and the governor, of a swivel or sleeve M, rod *k*, arm K′, forked guide K, and the double disk J, having a grooved projection within which the fork of said guide is adapted to bear, substantially as and for the purpose set forth.

4. In a wind-engine, the combination, with the double disk J and outer disk, G, of the cranks H, supporting the fans, and arms *g*, rigidly secured to the disk G, and provided with bearings through which said cranks pass, substantially as and for the purpose set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

CHARLES O. WEIDMAN.

Witnesses:
W. ENGEL,
ALBERT E. LYNCH.