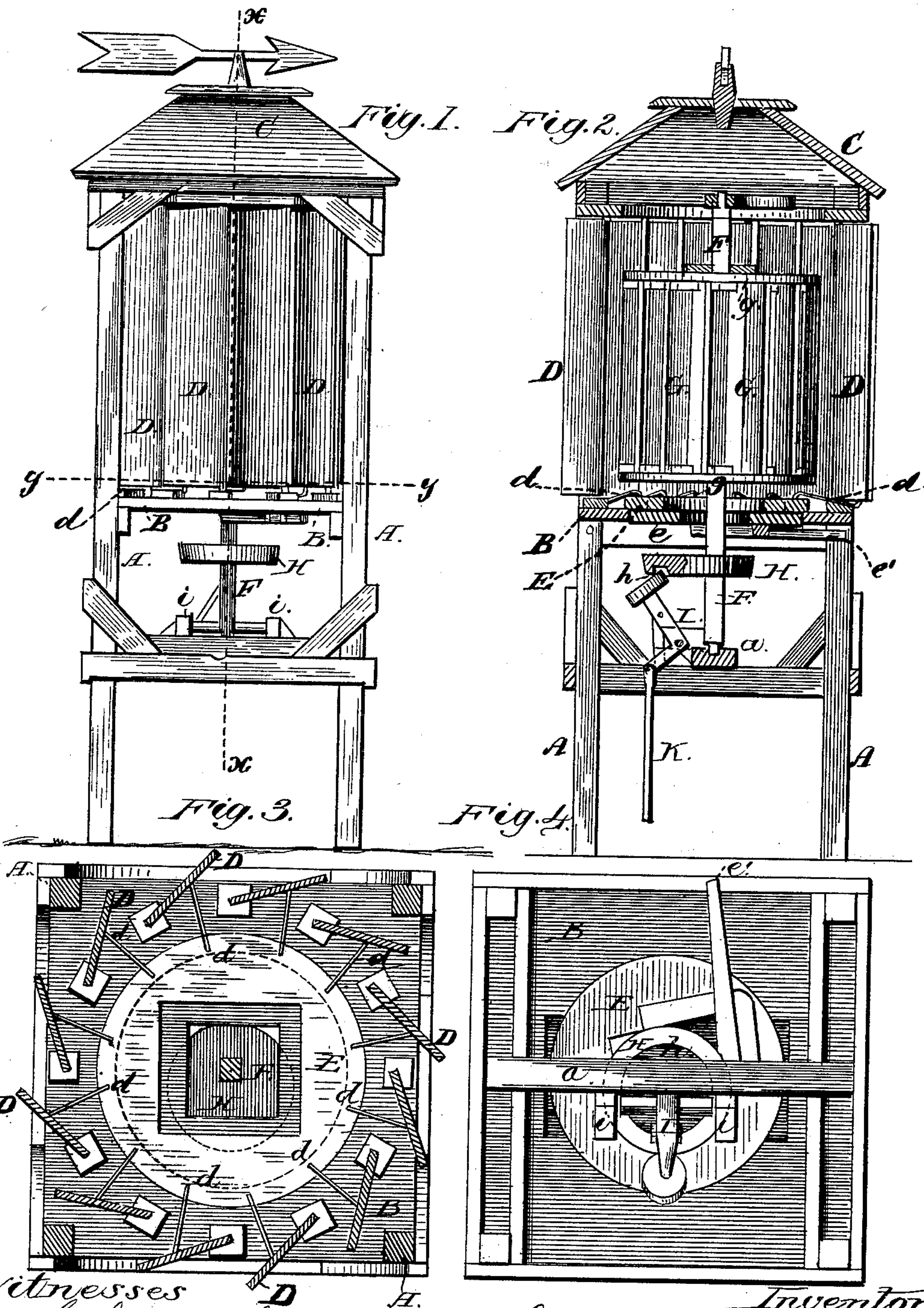


E. S. STAHLEY.
Windmill.

No. 223,256.

Patented Jan. 6, 1880.



Witnesses
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UNITED STATES PATENT OFFICE.

ERASTUS S. STAHLEY, OF AURORA, NEBRASKA.

WINDMILL.

SPECIFICATION forming part of Letters Patent No. 223,256, dated January 6, 1880.

Application filed July 21, 1879.

To all whom it may concern:

Be it known that I, ERASTUS S. STAHLEY, of Aurora, in the county of Hamilton and State of Nebraska, have invented certain new and useful Improvements in Windmills; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a side elevation. Fig. 2 is a vertical axial section taken on line *xx*, Fig. 1. Fig. 3 is a horizontal section taken on line *yy*, Fig. 1; and Fig. 4 is a view of the under side of the cam operating the bell-crank and pump-rod.

Similar letters of reference indicate corresponding parts in all the figures.

This invention relates to horizontal windmills, or that class of windmills in which an exterior series of vertical gates or shutters may be adjusted to admit more or less wind to a horizontal wheel within; and it consists in the detailed construction and combination of parts, substantially as hereinafter more fully described.

In the drawings, *A A* are the posts or uprights, supporting a platform, *B*, and roof *C*. *D* are the gates or shutters, which are pivoted in the roof *C* and platform *B*, and operated by rods *d*, which connect with a circular disk, *E*, having a lever-handle, *e'*, upon its under side, in like manner as the gates of a water-wheel. Disk *E* consists of two parts or sections, its lower part, *e*, being sunk into a circular opening in the platform *B*, as shown in Fig. 2, the shaft or vertical axle *F* passing through an opening in disk *E*.

The wind-wheel consists of an upper and lower annular plate or frame, *g g*, between which the vertical fans *G* are secured. Shaft *F* passes centrally through disks *g g*, its projecting upper end being pivoted in the roof, and its lower end is journaled in a cross-piece, *a*, below the platform *B*.

H is a cam keyed eccentrically upon shaft *F*, and having a groove, *h*, on its under side.

I is a bell-crank, journaled in bearings *i i*, that project from the cross-piece *a* under cam *H*, into the groove *h* of which the end of its upper arm is fitted, which is provided with a friction-roller, so as to run easy in the groove when the shaft revolves. To the end of the other horizontal arm of bell-crank *I* is pivoted the pump or sucker rod *K*, which reaches down into the well.

By turning lever *e'* the gates may be adjusted to admit more or less wind to the wheel; or they may be closed altogether when it is not desired to operate the mill.

The annular step *e* of the plate *E*, upon which the rods *d d* are pivoted, being inserted and fitted into the circular opening in the platform *B*, prevents lateral play or oscillation of said plate or disk *E*, and of the rods and shutters connected thereto, while at the same time the platform *B* forms a bearing or support for the stepped disk *E*.

By the combination and arrangement of the grooved cam *H* and bell-crank *I*, as described, there is a minimum of friction, which insures certainty of operation of the mill even in a light wind and under circumstances when an ordinary mill would be unable to perform its work satisfactorily.

Having thus described my improvement, I claim and desire to secure by Letters Patent of the United States—

In a windmill of the described class, the combination of the circularly-perforated platform *B*, supported upon standards *A A*, circular disk *E*, having annular downward-projecting step or shoulder *e*, fitting into the circular opening in platform *B* and provided with the lever *e'*, and pivoted gates or shutters *D*, provided with the operating-rods *d*, substantially as and for the purpose herein shown and specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

ERASTUS SETH STAHLEY.

Witnesses:

NELSON KUTCH,
JOSEPH LONG.