C. W. MILLS.

Pump-Governor.

No. 165,112. Patented June 29, 1875.

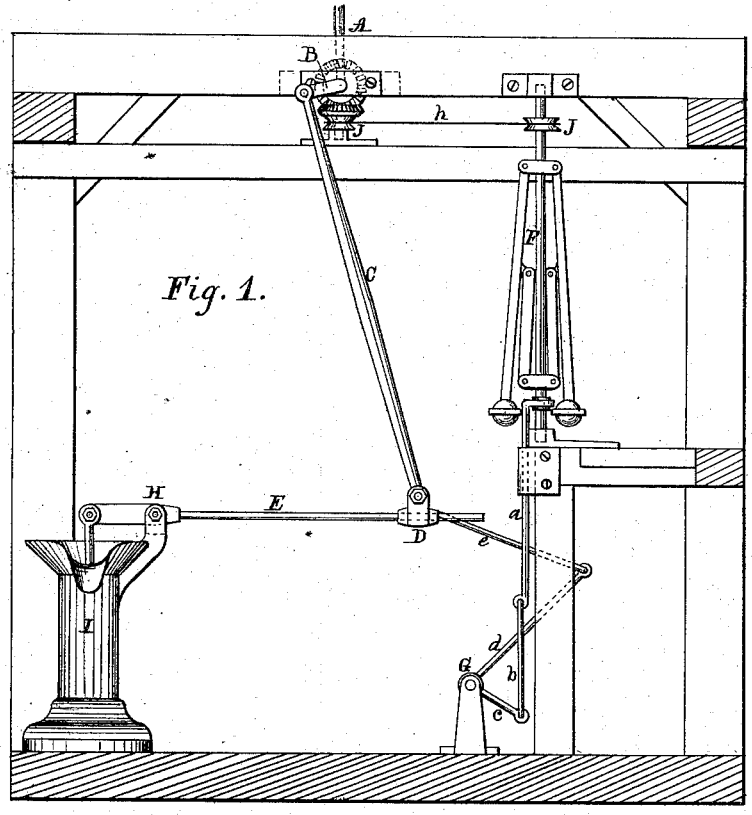

Fig. 1.

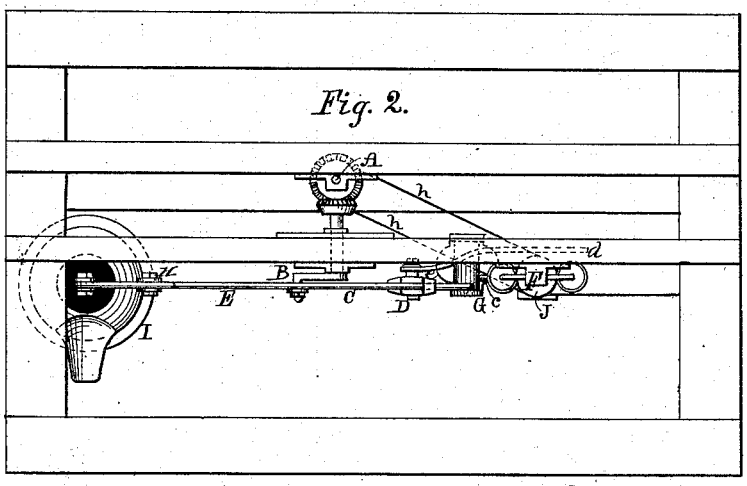

Fig. 2.

Witnesses:
Oscar A. Stephens
Hanson Brown.

Inventor:
Chauncey W. Mills.

THE GRAPHIC CO. PHOTO-LITH. 39 & 41 PARK PLACE, N.Y.

UNITED STATES PATENT OFFICE.

CHAUNCEY W. MILLS, OF ROCHESTER, NEW YORK.

IMPROVEMENT IN PUMP-GOVERNORS.

Specification forming part of Letters Patent No. **165,112**, dated June 29, 1875; application filed March 20, 1875.

To all whom it may concern:

Be it known that I, CHAUNCEY W. MILLS, of Rochester, State of New York, have invented an Improved Pump-Governor, of which the following is a specification:

The object of my invention is to give a windmill-pump a longer or shorter stroke, as the force of the wind is applied with a greater or lesser power.

Figure 1 of the accompanying drawing is a side view of the machine. Fig. 2 is a view from the top down.

A is the upright shaft to the windmill, connected by bevel-gear to crank-shaft B. C is a reach-rod from the crank-shaft B to the slide D on the pump-lever E. The slide D is connected to the governor F by means of the rocker-shaft G, with its arms and connecting-rods *a b c d e*.

The governor is run by means of pulleys J J, connected by belt or chain. When the machine is at rest the slide D will be at the outer end or farthest from the fulcrum H of pump-lever E. When a light wind moves the upright shaft A at a low rate of speed the balls on the governor will not rise; therefore the slide D does not move on lever E, and the stroke of the pump is very short and requires very little power to run it. But as the force of the wind increases the balls on the governor rise, lifting up the rod *a* and the connecting-rod *b*, and, by arm *c*, moving the rocker-shaft G, with arm *d* and connecting-rod *e*, and moving slide D toward the fulcrum H, lengthening the stroke of the pump. Then, as the force of the wind decreases, the balls on the governor fall, moving slide D away from fulcrum H, shortening the stroke of the pump. Thus I lengthen or shorten the stroke of the pump in proportion as the balls on the governor rise or fall by the unequal force of the wind.

By this means I not only do away with all other kind of governors, but use all the wind-power that comes direct upon my pump.

In manufacturing, I would not confine myself to make the slide D with a round or circular bearing on pump-lever E, but would use it in any other form, whereby the end of reach-rod C may be attached to pump-lever E and be moved along the line of said lever, for the purpose of lengthening or shortening the stroke of a pump by means of ball-governor, as above described.

I claim as my invention—

1. The combination, substantially as herein set forth, of lever E, slide D, rod C, and governor F, with the necessary connecting devices, all arranged to automatically increase or decrease the stroke of a pump.

2. The combination of slide D, pump-lever E, reach-rod C, rocker-shaft G, with its arms and connecting-rods *a b c d e*, for the purpose substantially as described.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

CHAUNCEY W. MILLS.

Witnesses:

OSCAR A. STEPHENS,

ALANSON BROWN.