

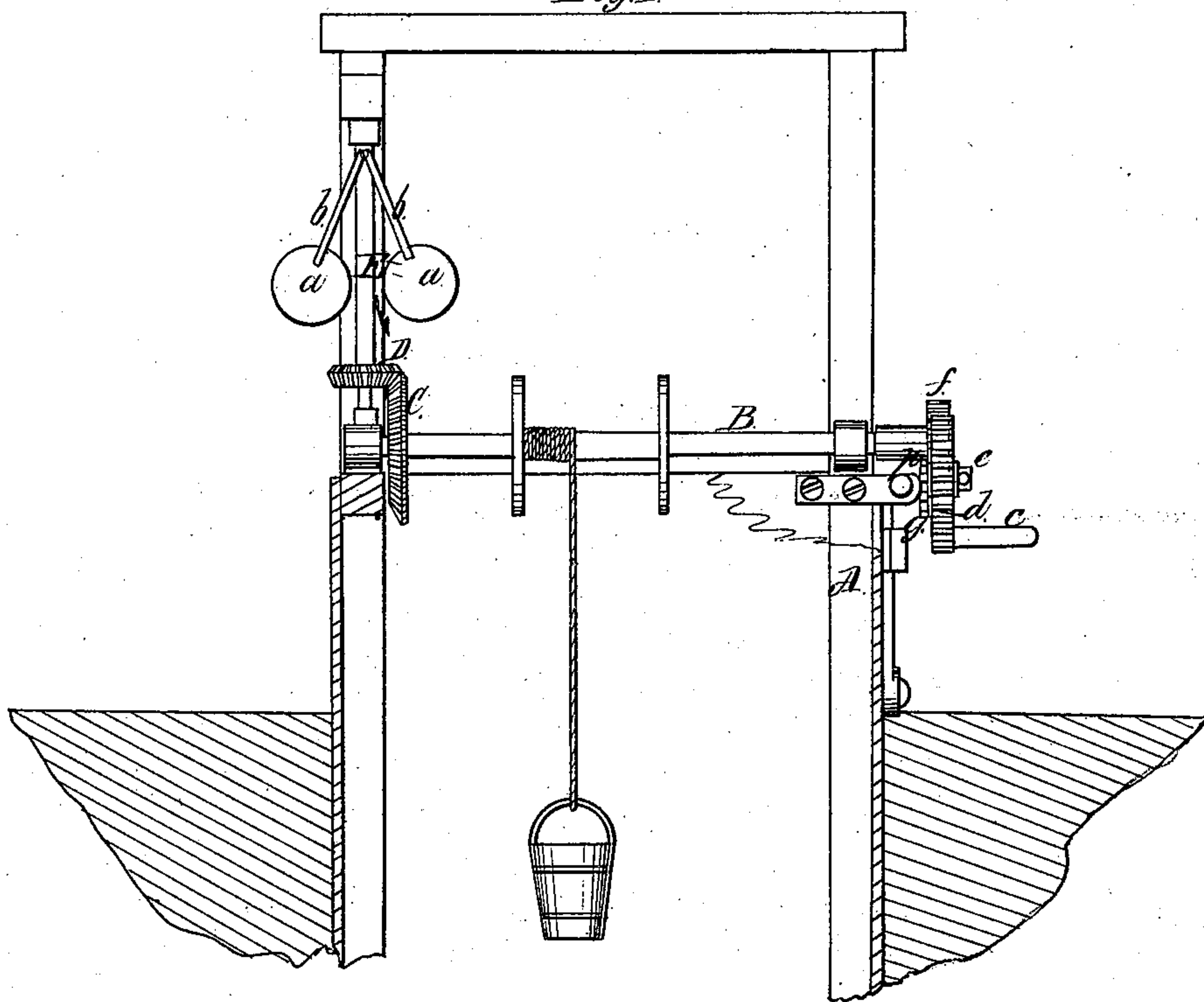
*C. Gullmann*

*Windlass Water Elevator*

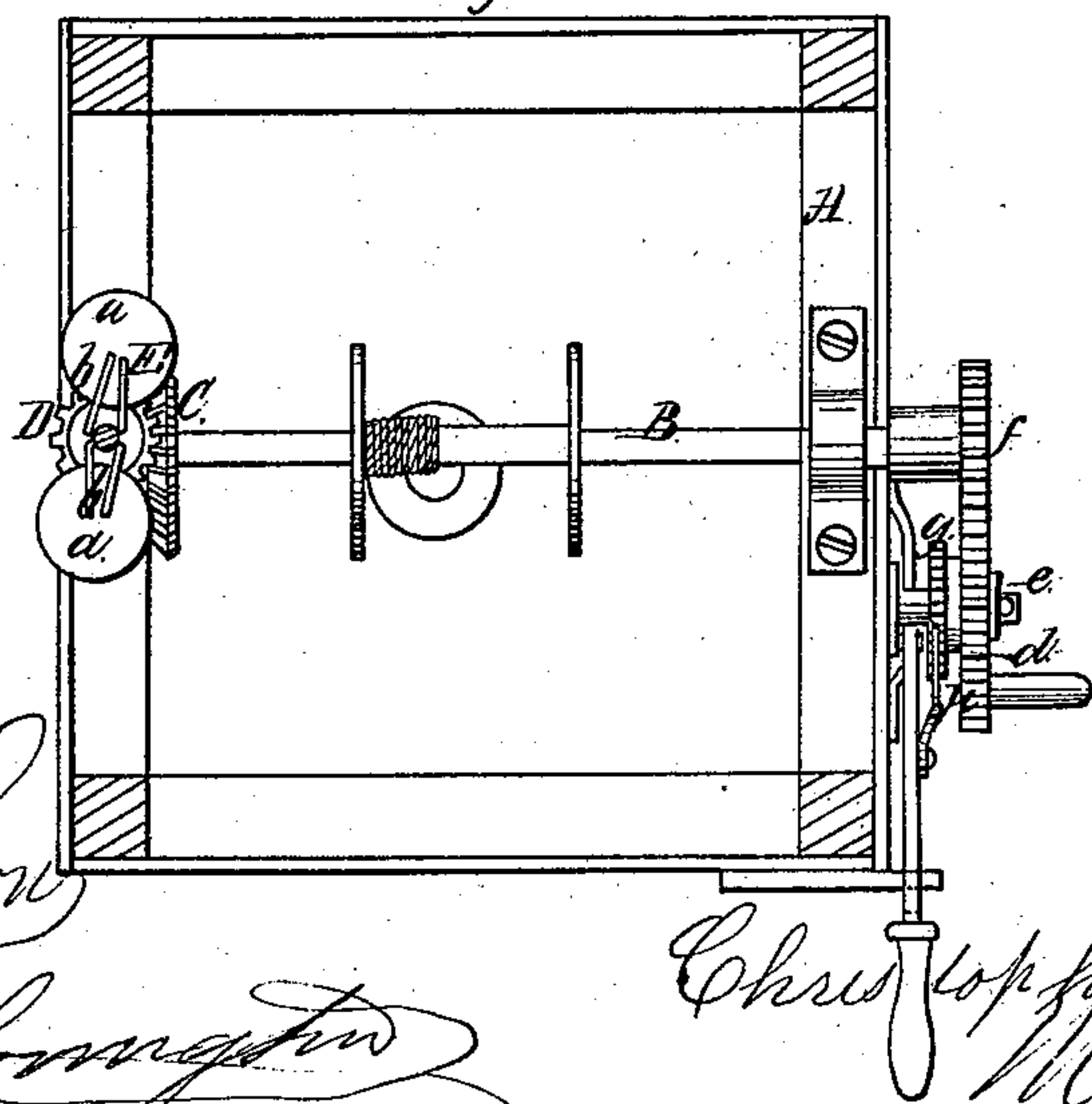
*N<sup>o</sup> 54,334.*

*Patented May 1, 1866.*

*Fig. 1.*



*Fig. 2.*



*Witnesses:*

*J. M. Lyon*  
*W. M. Thompson*

*Inventor:*

*Christopher Gullmann*  
*Wm. C. Murray*

# UNITED STATES PATENT OFFICE.

CHRISTOPHER GULLMANN, OF POUGHKEEPSIE, NEW YORK.

## IMPROVEMENT IN WELL-CURBS.

Specification forming part of Letters Patent No. 54,334, dated May 1, 1866.

*To all whom it may concern:*

Be it known that I, CHRISTOPHER GULLMANN, of Poughkeepsie, in the county of Dutchess and State of New York, have invented a new and Improved Well-Curb; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 represents a vertical section of this invention. Fig. 2 is a horizontal section of the same.

Similar letters of reference indicate like parts.

This invention consists in the arrangement of a ball or disk governor, in combination with the windlass-shaft of a well-curb, in such a manner that by the action of the air against the balls or disks being secured to swinging arms, so that the same are allowed to fly out if the speed of the governor increases, and that the resistance of the air is made to act on longer levers, and consequently with increased power, if the speed of the governor is large than if said speed is small.

The invention consists, also, in the arrangement of a movable gear and ratchet-wheel, in combination with the windlass-shaft and stop-lever, in such a manner that by throwing the movable gear in gear with the windlass-shaft the bucket can be wound up and retained in any desired position with ease and facility, and by throwing the movable gear out of gear with the windlass-shaft the bucket is free to descend.

A represents a well-curb, the top edges of which form the bearings for the windlass-shaft B. On one end of this shaft is mounted a bevel-wheel, C, which gears in another bevel-wheel, D, secured to the spindle of the governor E. This governor is constructed in the ordinary manner of a common ball-governor, although instead of the balls *a* simple disks

might be secured to the swinging arms *b*. If the windlass-shaft revolves with considerable speed the resistance of the air against the balls or disks *a* acts as a check, and if said speed increases the arms *b* fly out and the lever against which the air acts is lengthened, so that its action is still more powerful than before. By this arrangement the speed of the descending bucket is regulated automatically, and said bucket may be allowed to descend freely without danger of sustaining any injury.

In winding up the bucket the windlass-shaft is turned by the action of a crank, *c*, which is secured in a cog-wheel, *d*. This cog-wheel is mounted on a stud, *e*, and it is so arranged that it can be thrown in or out of gear with the cog-wheel *f*, which is secured to the end of the windlass-shaft. On the hub of the cog-wheel *d* is secured a ratchet-wheel, *g*, and a stop-pawl, *h*, serves to arrest the windlass-shaft in any desired position. If the cog-wheel *d* is thrown out of gear with the windlass-shaft the bucket is free to descend, and by these means the operation of raising water is greatly facilitated. By giving to the cog-wheels *d* and *f* the proper proportion the operation of winding up the bucket can be performed with more or less speed, according to the greater or smaller power at command, and when the bucket has been raised and emptied the gear *d g* can be readily thrown out of gear with the windlass-shaft, and the bucket is free to descend without obstruction.

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

The arrangement of a ball or disk governor, E, in combination with the windlass-shaft B and well-curb A, constructed and operating substantially as and for the purpose described.

The above specification of my invention signed by me this 23d day of November, 1865.

CHRISTOPHER GULLMANN.

Witnesses:

M. M. LIVINGSTON,  
W. HAUFF.