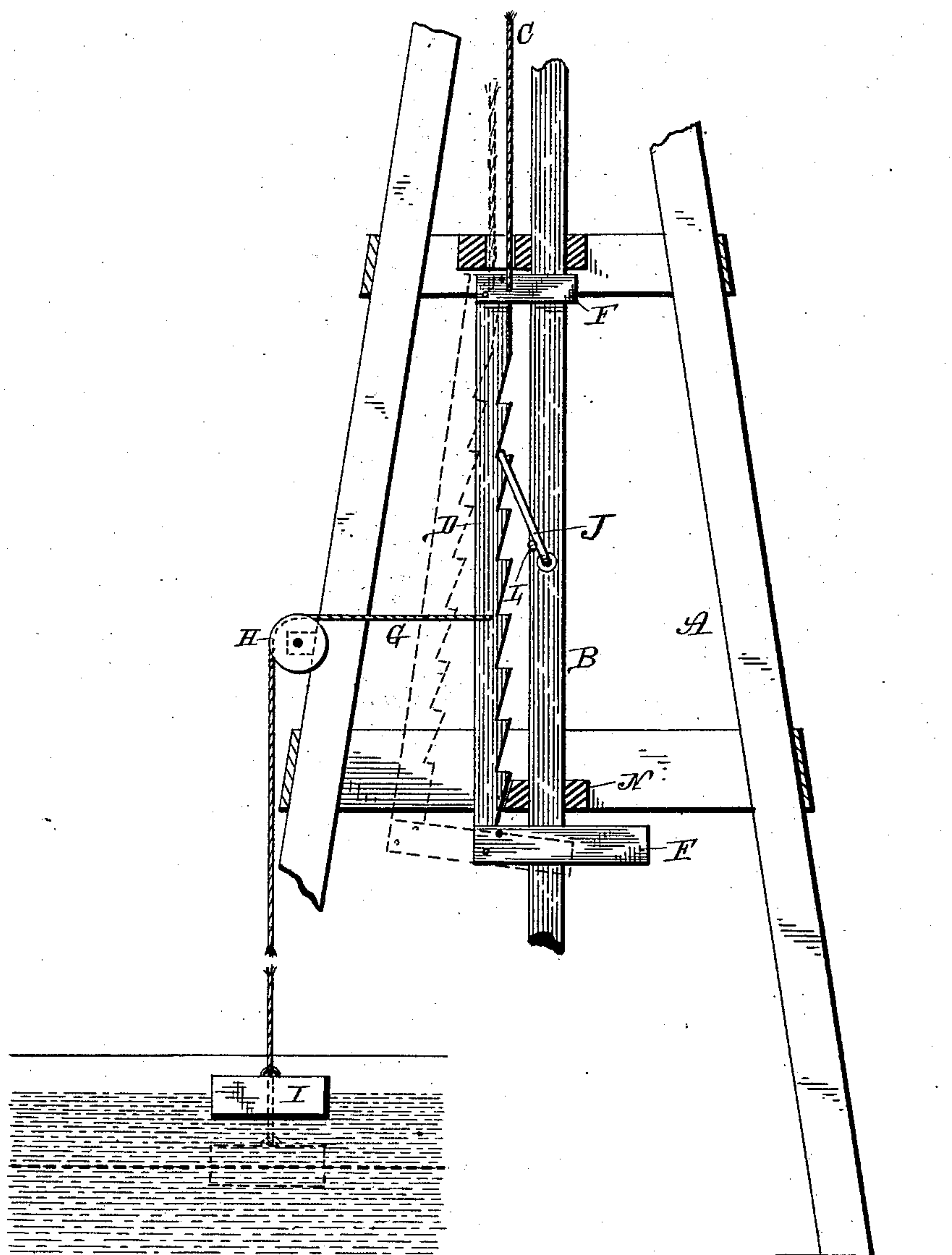


(No Model.)

J. O. STAYNER.
WINDMILL.

No. 299,869.

Patented June 3, 1884.



—WITNESSES.—

Louis T. Gardner
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—INVENTOR.—

Jas. O. Stayner,
per
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UNITED STATES PATENT OFFICE.

JAMES OLIVER STAYNER, OF ANGOLA, INDIANA.

WINDMILL.

SPECIFICATION forming part of Letters Patent No. 299,869, dated June 3, 1884.

Application filed February 13, 1884. (No model.)

To all whom it may concern:

Be it known that I, J. OLIVER STAYNER, of Angola, in the county of Steuben and State of Indiana, have invented certain new and useful Improvements in Windmills; 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 it, reference being had to the accompanying drawing, which forms part of this specification.

My invention relates to an improvement in windmills; and it consists in the combination of the pumping-rod, which is operated vertically by the wind-wheel in the usual manner, and which is provided with a suitable connecting-link with a rack-bar, which is movable horizontally back and forth in relation to the pump-rod, and which is connected with the wind-wheel at its upper end for the purpose of drawing the mill around out of the wind and stopping its action, and with a float at its lower end for the purpose of drawing it back out of action with the pumping-rod when the level of the water has been lowered, all of which will be more fully described hereinafter.

The object of my invention is to provide an attachment for windmills which will automatically throw the wheel out action as soon as a sufficient quantity of water has been pumped, and thus prevent any needless waste of water or unnecessary work of the mill.

The accompanying drawing represents a side elevation of my invention.

A represents the derrick, and B the pumping-rod, which passes vertically through it, and which is connected at its upper end with the crank upon the inner end of the wheel-shaft, in the usual manner. Also suspended in the frame by means of a rope, cord, wire, or chain, C, which passes up and is connected to the wind-wheel for the purpose of throwing it out of the wind, is the rack-bar D, of any suitable length, and which is loosely connected with the pumping-rod by means of the U-shaped frames, guides, or holders F. This rack-bar is supported in position by the cord, wire, or rope C at its upper end, and is connected near its lower end by means of the cord, wire, or

chain G, which passes over a suitable guiding-pulley, H, with the weighted float I, which is placed in the tank into which the water is to be pumped. When the water has fallen below a certain point, the weighted float exerts its whole power in drawing the rack-bar upward and away from the pumping-rod; but when the water has risen to the required height, the weight floats upon the water and slackens the cord C to such an extent that the rack-bar D then swings from its own gravity over toward the pumping-rod.

Pivoted to the pumping-rod at any suitable point is a coupling-link, J, which is prevented from falling over toward the rack-bar beyond a certain angle by means of the stop L. When the rack-bar D is allowed to swing over toward the pumping-rod, the link J catches upon the top of one of the ratchets and draws the rack-bar downward until one of the other shoulders below catches under the edge of the cross-bar N, which acts as a guide for the pumping-rod. At each successive stroke of the pump-rod the ratchet-bar is drawn down farther and farther until the wheel is drawn around out of the wind, and all the movement of the pump-rod is stopped. If one of the ratchets or shoulders of the ratchet-bar did not catch under the cross-bar, the ratchet-bar would be drawn back in position as fast as the pump-rod was raised upward; but as the ratchet-bar is made to take a fresh hold against the under side of the cross-bar at every downward stroke of the pumping-rod, the ratchet-bar is gradually depressed until the wheel is drawn around out of the wind. As soon as the wheel is drawn around out of the wind, the movement of the pumping-rod ceases, and the rack-bar remains depressed as long as the water maintains a level above a certain point. As soon as the water falls below this level, the weighted float I pulls the rack-bar D sidewise beyond the reach of the coupling-link J, and the weight of the wheel instantly causes it to swing around into the wind again. This action is repeated as often as the tank is filled and the water drawn off.

Having thus described my invention, I claim—

The combination, with the vertically-moving pumping-rod of a windmill and a connecting-latch which is loosely attached thereto, of a ratchet-bar which has both a vertical and a
5 horizontal motion, and which is connected at its upper end by means of a cord, wire, or chain with the wind-wheel, and at its lower end with a weighted float, which is placed in

the tank into which the water is pumped, substantially as shown and described. 10

In testimony whereof I affix my signature in presence of two witnesses.

JAMES OLIVER STAYNER.

Witnesses:

EDWARD H. ROBERTS,
GEORGE WHITNEY.