

(No Model.)

B. W. TUTTLE.

WINDMILL WATER SUPPLY REGULATOR.

No. 327,503.

Patented Sept. 29, 1885.

Fig 1

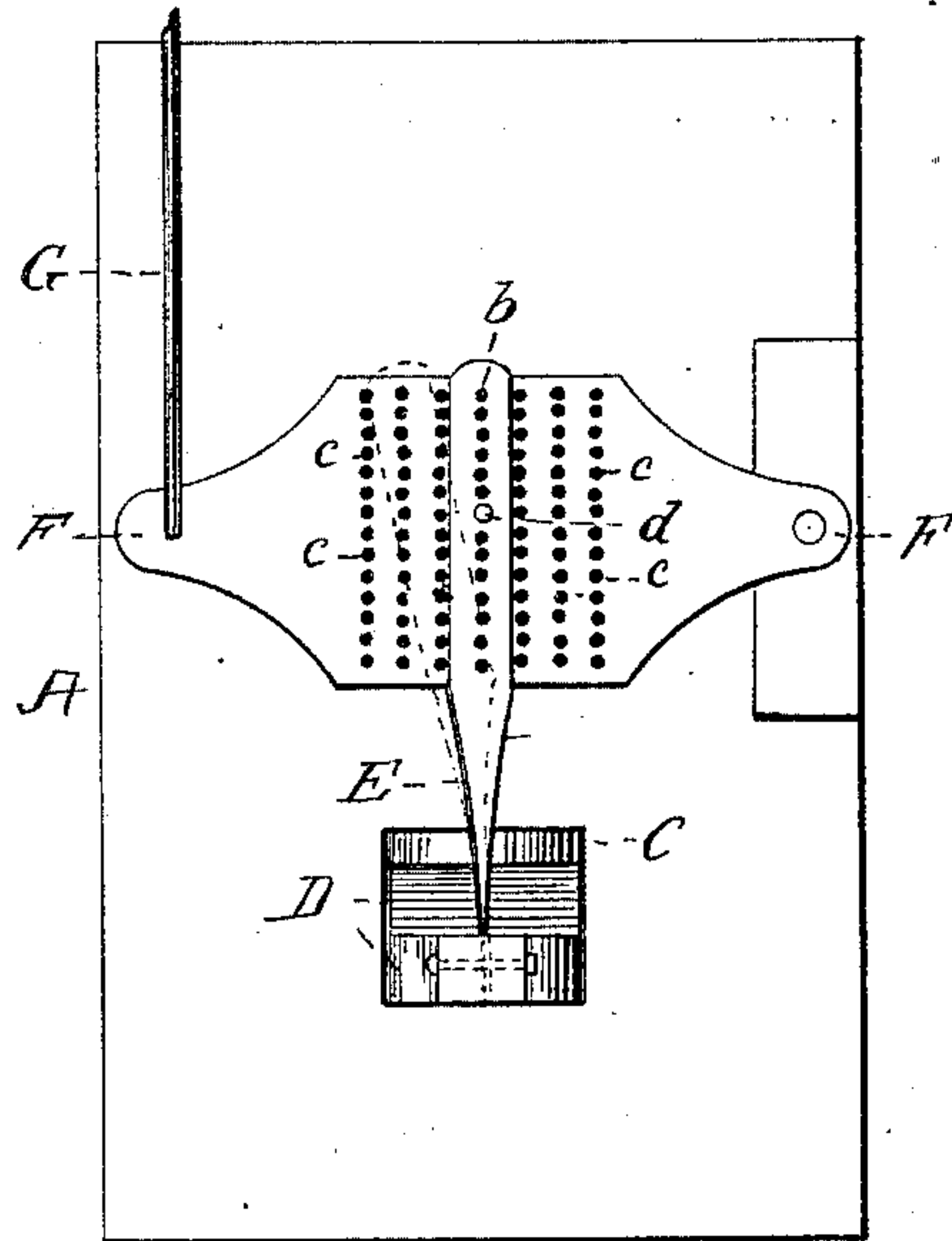
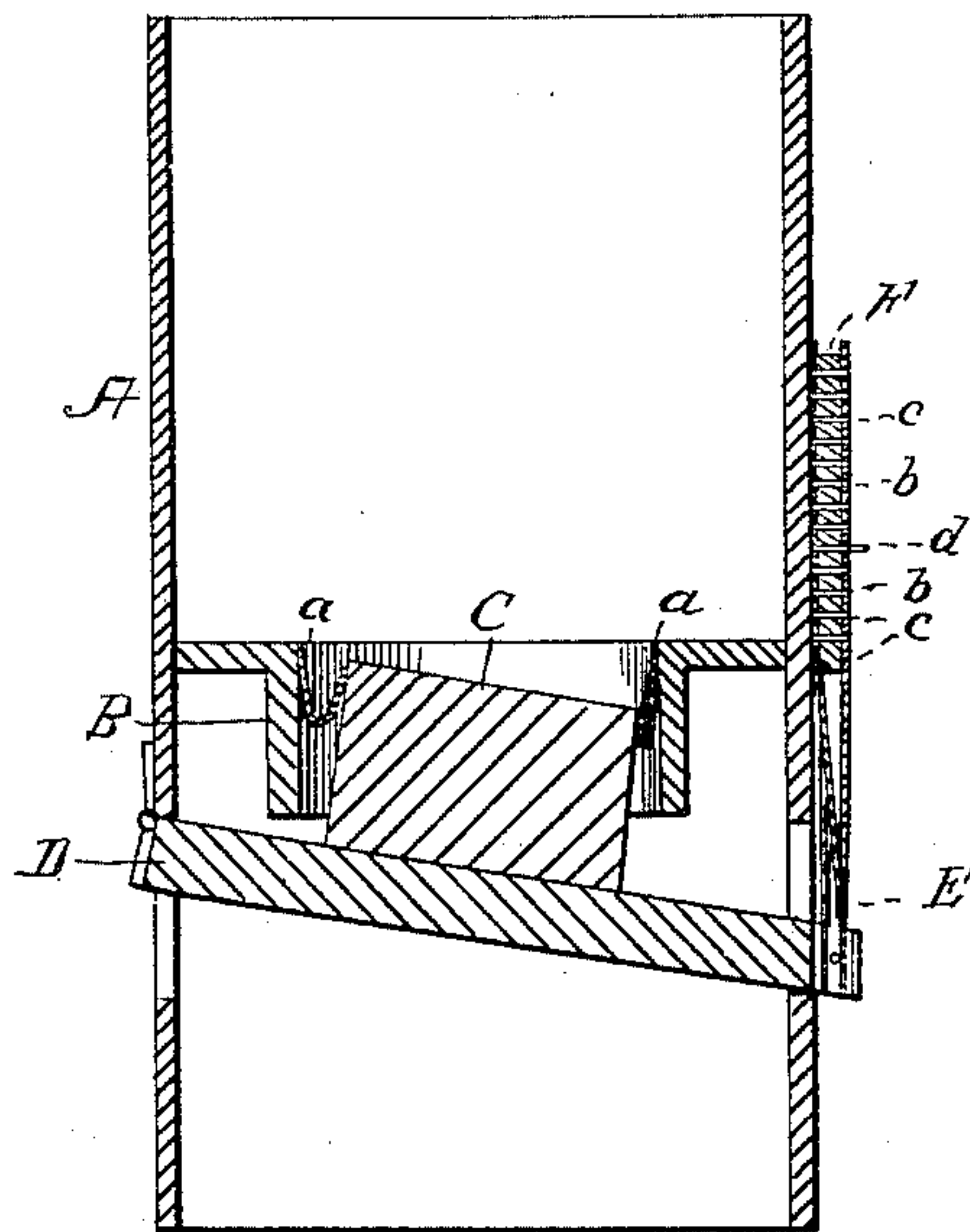


Fig 2



WITNESSES:

Storrs A. Clark.

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INVENTOR:

Besie W. Tuttle
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UNITED STATES PATENT OFFICE.

BEERI W. TUTTLE, OF COUNCIL HILL, ILLINOIS, ASSIGNOR OF ONE-HALF TO
ANTHONY W. T. RAW, OF SAME PLACE.

WINDMILL WATER-SUPPLY REGULATOR.

SPECIFICATION forming part of Letters Patent No. 327,503, dated September 29, 1885.

Application filed February 19, 1885. (No model.)

To all whom it may concern:

Be it known that I, BEERI W. TUTTLE, of Council Hill, in the county of Jo Daviess and State of Illinois, have invented a new and useful Improvement in Windmill Water-Supply Regulators; and I do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

The invention involved in this application relates to an apparatus for automatically shutting off the supply of water to the tank or reservoir of a windmill; and the improvements comprise certain connections between the tank and the pump, whereby the latter may be made to automatically cease its actions when the water has reached any certain depth in the tank, and likewise be made to resume its work at any desired time. The novelty of these improvements therein consists in a valve or piston adapted to vertical movement within a tube in the bottom of a tank or reservoir, and in the connections between this valve or piston and the rod or lever, which operates to throw out of gear the mill or other means used to supply the tank or reservoir with water, all as more fully hereinafter described and claimed.

For the better understanding of the construction, arrangement, and operation of the improved apparatus, attention is invited to the accompanying drawings, in which—

Figure 1 is a side elevation of the water tank or reservoir and its attachments; and Fig. 2, a vertical section through the tank and the valve or piston as arranged in its bottom.

Similar letters of reference indicate corresponding parts in both views.

A denotes a tank or reservoir, which may be adapted in any well-known way, to be supplied with water through the operations of a windmill. The bottom of this tank is provided with a tube, B, which is preferably an extension of the tank above or below its bottom, and is open at both ends, and communicates with the interior of the tank. Within this tube is arranged a valve or piston, C, hav-

ing a flexible connection, *a*, with the tube, all around its interior, and supported and secured at its base upon a lever, D, hinged at its inner end to the bottom of the tank, as shown. The connection between the valve or piston C and the tube D consists of flexible material, impenetrable to a certain extent by water—such as rubber or leather—and this material, is secured at one edge to the interior of the tube, near its lower end, and at the other edge to the exterior of the valve or piston, near its upper end, or vice versa; or it may be secured at other points upon these parts, provided that it does not prevent the valves or piston from having free vertical movement within the tube.

The lever D, which supports the valve or piston C, extends across under the bottom of the tank (which is supported above the ground) and projects out from the same on one side. To this projecting end is attached the lower end of a bifurcated arm, E, which extends upward and embraces a broad-faced lever, F, fulcrumed at one end upon the side of the tank, and connected at its opposite end with the end of a rod, G, which operates to throw out of gear the mill or other means employed to force the water into the tank. The arm E is provided with a vertical row of perforations, *b*, and lever F is provided with numerous corresponding perforations, *c*, arranged in parallel rows, extending above and below its horizontal center. The arm E and lever F are connected through these perforations by means of a suitable coupling-pin, *d*, and from the arrangement of these perforations the point of connection is adjustable toward or away from the fulcrum of the lever, and above and below its horizontal center. This connection enables the supply of water to be cut off when the tank has received an amount of water sufficient in weight to overcome the resistance or tension of the rod G, which throws the windmill out of connection with the pumping mechanism, or closes the vanes of the mill, and thus cuts off the power. This sufficiency of pressure may be obtained when the water has reached any desired depth in the tank or reservoir A by the adjustability

of the connection between the arm E and lever F to various points upon the latter toward or away from or above and below its fulcrum, to increase or diminish the tension of the connecting-rod G as the lever F is depressed.

The operation of the connection between the tank and the mill are substantially as follows: After the connection between the arm E and lever F has been adjusted according to the amount of water desired to be supplied to the tank, when the water reaches the desired depth, the weight of the same is sufficient to depress the valve or piston C, which, in succession, depresses the lever D, allowing the weight of water to increase, thereby depressing the arm E and lever F, and transmitting the movement to the connecting-rod G, which throws the windmill out of connection with the pumping mechanism, or closes the vanes of the mill and cuts off the supply of water immediately. As the contents of the tank are drawn off and the mill resumes its operation the weight of the water descends, and tension of the connecting-rod being greater, the several parts move upward and resume their normal positions.

If it be desired to increase or lessen the depth of water in the next operation, the connection of the lever and arm, is accordingly adjusted, and the water is then gradually discharged into the tank until its weight, together with the counter-balance of the intermediate connections, is sufficient to again cut off the supply.

This apparatus is an exceedingly cheap and simple device, convenient and easy to control, and by merely adjusting the connection of parts intermediate the tank and pump the supply of water is cut off automatically at any desired depth within the tank or reservoir of the mill.

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

1. In an apparatus of substantially the character described, the combination, of a tank or reservoir, a valve or piston in the bottom thereof, a hinged lever supporting said valve or piston, and two adjustably-connected levers or arms, substantially as described. 45

2. In an apparatus of substantially the character described, the combination, with a water-tank and means adapted to cut off the water-supply, of a valve or piston arranged within a tube in the bottom of said tank and having flexible connections with the tube all around, substantially as described. 50 55

3. In an apparatus of substantially the character described, the combination, with the water-tank and a rod adapted to cut off the water-supply, of an intermediate lever having an adjustable connection with an arm attached to a hinged lever supporting a valve or piston adapted to vertical movement in the bottom of the tank, substantially as described, and for the purpose set forth. 60 65

4. In an apparatus of substantially the character described, the combination of a tank or reservoir, a valve or piston in the bottom thereof, a hinged lever supporting said valve or piston, and a perforated arm and perforated lever having connections with the means for cutting off the water-supply, substantially as described. 70

5. In the apparatus described, the combination of the water tank A, tube B, valve or piston C, lever D, bifurcated and perforated arm E, perforated lever F, coupling-pin *d*, and connecting-rod G, substantially as described. 75

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

BEERI W. TUTTLE.

Witnesses:

MONROE M. CADY,
PETER J. RAW.