(No Model.)

E. A. LEINARD.

WINDMILL REGULATOR.

No. 553,170. Patented Jan. 14, 1896.

Fig. 1.

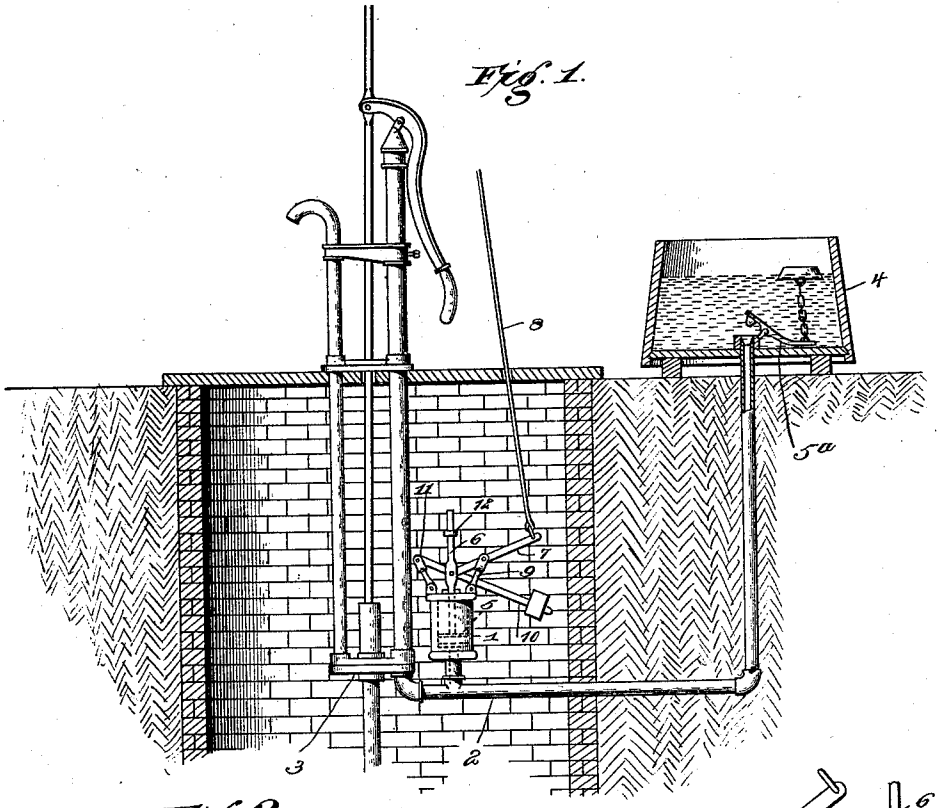

Fig. 2.

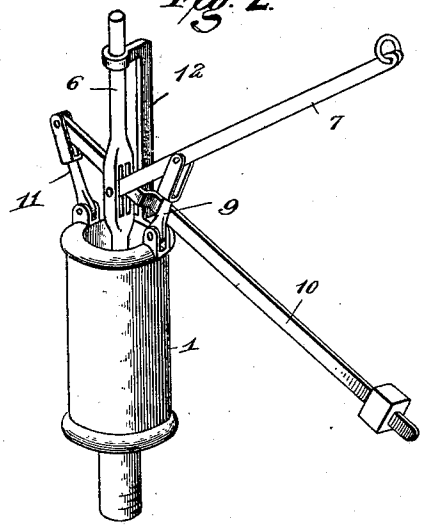

Fig. 3.

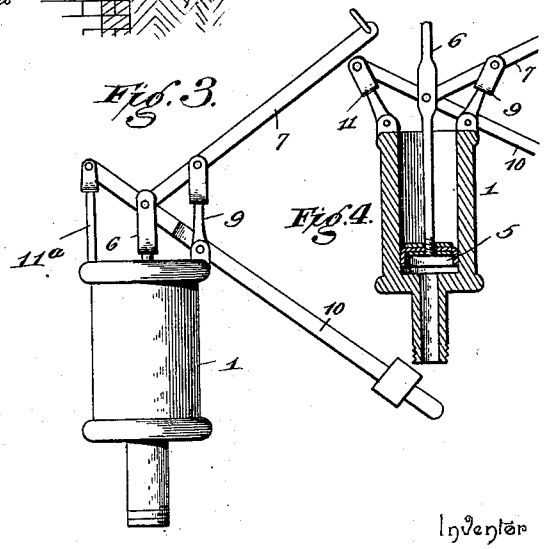

Fig. 4.

Witnesses

John C. Shaw

F. J. Riley

Inventor

Edgar A. Leinard,

By his Attorneys,

C. A. Snow & Co.

UNITED STATES PATENT OFFICE.

EDGAR A. LEINARD, OF KENTON, OHIO, ASSIGNOR OF TWO-THIRDS TO THOMAS J. CANTWELL AND GEORGE S. BINCKLEY, OF SAME PLACE.

WINDMILL-REGULATOR.

SPECIFICATION forming part of Letters Patent No. 553,170, dated January 14, 1896.

Application filed May 21, 1895. Serial No. 550,115. (No model.)

To all whom it may concern:

Be it known that I, EDGAR A. LEINARD, a citizen of the United States, residing at Kenton, in the county of Hardin and State of Ohio, have invented a new and useful Windmill-Regulator, of which the following is a specification.

The invention relates to improvements in windmill-regulators.

The object of the present invention is to improve the construction of windmill-regulators and to provide a simple and efficient one which will be automatic in its operation and capable of throwing a windmill out of the wind when a tank is full, and adapted to start the windmill again when the contents of the tank have been consumed.

The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

In the drawings, Figure 1 is a sectional view of a windmill-regulator constructed in accordance with this invention and shown connected with a tank and with the operating-wire of a windmill. Fig. 2 is a detail perspective view of the regulator detached. Fig. 3 is a side elevation illustrating a modification of the invention. Fig. 4 is a sectional view of the regulator shown in Fig. 2.

Like numerals of reference indicate corresponding parts in all the figures of the drawings.

1 designates a standard disposed vertically and connected at its lower end with a supply-pipe 2, extending from a pump 3 of a windmill to a tank 4, which is provided with a float-valve 5^a for closing the supply-pipe when the tank is sufficiently filled. Within the cylinder 1 is arranged a piston 5, secured to the lower end of the vertically-disposed rod or stem 6. The piston and its rod or stem form a plunger, which is adapted to be raised in the cylinder by back-pressure of the water in the supply-pipe when the float-valve is closed by reason of the tank being full, and the rod or stem has connected to it one end of a lever 7, which is attached to the lower terminus of the operating-wire 8 of a windmill. The lever 7 is fulcrumed intermediate of its ends on a support 9. Its inner end is connected with the plunger pivotally, and its outer end is provided with a ring for the attachment of the operating-wire 8, whereby, when the plunger is moved upward in the cylinder, the operating-wire will be drawn downward to throw the windmill out of the wind, as will be readily understood. The piston or plunger-head is inverted-cup shaped and is constructed of leather or other suitable material, and the rod or stem 6 has attached to it a weighted lever 10, adapted to force the plunger downward to throw the windmill into operation. The weighted lever is pivoted intermediate of its ends to the rod or stem 6 and is provided at its outer end with an adjustable weight, and its inner end is fulcrumed on a support 11, similar to the support 9 for the lever 7. The supports 9 and 11 are disposed at opposite sides of the cylinder and have their lower ends hingedly mounted on the top of the cylinder, and the rod or stem 6 passes through an opening of a substantially L-shaped guide 12, mounted on the top of the cylinder and having an inwardly-extending arm provided with the said opening. The supports 9 and 11 are adapted to swing inward and outward to permit free vertical movement of the rod or stem 6, and the levers connected therewith are permitted free movement.

In Fig. 3 of the accompanying drawings is illustrated a modification of the invention, in which one of the supports is rigid, and the guide is dispensed with. In this form of the invention the support 11^a for the weighted lever is rigid, and the other one is hingedly or pivotally mounted similar to that heretofore described.

It will be seen that the windmill-regulator is exceedingly simple and inexpensive in construction, it is positive and reliable in operation, and it is sensitive and capable of readily throwing the windmill into and out of operation. The parts are compactly arranged and are capable of being readily located in a well or cistern, and the lever 7 has sufficient throw to operate completely a windmill.

Changes in the form, proportion, and the minor details of construction may be resorted

to without departing from the principle or sacrificing any of the advantages of this invention.

What I claim is—

1. In a wind mill regulator, the combination of a cylinder, a piston arranged therein and provided with a stem, a lever fulcrumed intermediate of its ends at one side of the cylinder and having its inner end connected to the stem, and its outer end connected with the operating wire or the like of a wind mill, and a weighted lever fulcrumed at its inner end at the opposite side of the cylinder and connected intermediate of its ends with the stem, and provided at its outer end with a weight, substantially as described.

2. In a wind mill regulator, the combination of a cylinder, a piston arranged therein and having a stem, the opposite supports hingedly connected at their lower ends with the cylinder, a guide mounted on the cylinder and receiving the stem, a lever fulcrumed intermediate of its ends on one of the supports and connected at its inner end to the stem and designed to be connected at its outer end with the operating wire of a wind mill, and a weighted lever fulcrumed at its inner end on the other support and connected intermediate of its ends to the stem and provided at its outer end with a weight, substantially as described.

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

EDGAR A. LEINARD.

Witnesses:

JOHN MCELREE,

WILLIAM D. DOWLING.