

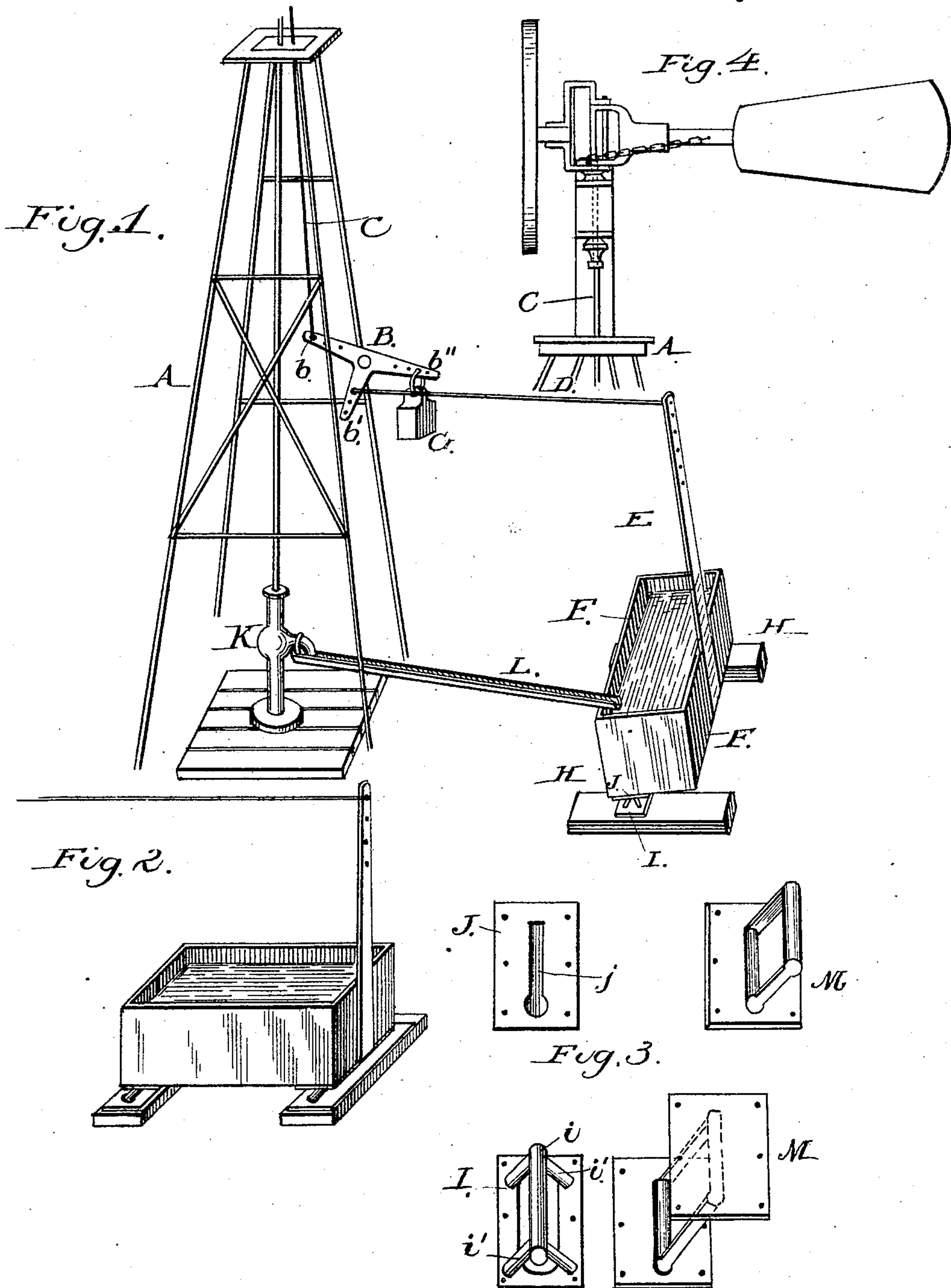
(No Model.)

W. I. WOOSTER.

MEANS FOR CONTROLLING WINDMILLS.

No. 321,777.

Patented July 7, 1885.



WITNESSES

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WILLIAM I. WOOSTER, OF HARVARD, ILLINOIS.

MEANS FOR CONTROLLING WINDMILLS.

SPECIFICATION forming part of Letters Patent No. 321,777, dated July 7, 1885.

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

To all whom it may concern:

Be it known that I, WILLIAM I. WOOSTER, a citizen of the United States, residing at Harvard, in the county of McHenry and State of Illinois, have invented a new and useful Improvement in Devices for Controlling Windmills, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 represents the derrick-frame of a windmill with my improvements attached. Fig. 2 shows a modification of my improvement. Fig. 3 are details referred to. Fig. 4 represents a detail showing how the rod may be attached to the vane of a windmill.

My present invention relates to a novel method of automatically regulating any windmill by means of a water-tank; and it consists in the combination of devices hereinafter explained, and specifically pointed out in the claims.

To enable others skilled in the art to make and use my invention, I will now proceed to describe the manner in which I have carried it out.

In the drawings, A represents the frame of a windmill-tower constructed and adjusted in the ordinary way. To this frame I pivot the three-armed bell-crank lever B, and attach to its arm *b* the lower end of the rod C, by which the wheel of the mill is operated. The arm *b* is perforated along its length for the purpose of affording an easy adjustment to the "pull" of the rod C, as will be readily seen. To the arm *b'* of the lever I attach a wire, D, the opposite end of which is secured to a vertical lever-arm, E, rigidly connected to the side of a tank, F, as shown in Fig. 1. The wire D may be of any desirable length to suit the position of the tank and its distance from the mill. To the third arm, *b''*, of the lever I suspend the weight G. Both the arms *b'* and *b''* are perforated like the arm *b*, to permit of a ready adjustment of the several parts.

The tank F is balanced upon its foundation-timbers in a novel way. On the timbers H is secured the metal plate I, as shown in Fig. 3. This plate has cast upon it the bench-bar *i*, resting upon the legs *i'*, so as to raise the bench above the level of the plate, and on the bottom of the tank and outside of its longitudinal center (and nearer to the side toward the mill) is secured another plate, J, having

cast upon it a slotted tube, *j*, to fit over and partially inclose the bar *i*. It is evident when these plates I and J are secured in position the tank F can be slipped upon the bar *i*, when it will be held pivoted to the timbers H, and where it will be free to rock as may be required.

Now, the operation of my device is as follows: The balance-weight G having been adjusted on the arm *b''* of the lever B to counterbalance the quantity of water desired in the tank, and the pump K having delivered that amount through the pipe L, the tank F, by the overpowering weight of the water, will be caused to rock on the bar *i*, which will throw back the arm E and operate the bell-crank lever B, which in turn raises the weight G and pulls down the rod C, when the wind-wheel will be forced to turn from the wind and stop revolving. It must remain still until sufficient water is consumed from the tank to enable the weight G, by means of the lever B and wire D, to tip or rock the tank forward again, which reverse position of the tank immediately releases the rod C, and the wheel of the mill resumes its revolution and continues to revolve until the weight of water taken from the tank is again replaced, when the tank again rocks backward and the mill is again stopped.

It is evident that the construction and arrangement of the tank and rocking bar may be changed, as shown in Fig. 2, and at M in Fig. 3, without departing from the spirit of my invention.

I am aware that tanks hinged at one end for automatically controlling windmills are not new, and I do not claim such as my invention; but

What I do claim as my invention is—

1. The tank F, the vertical arm E, and weight G, in combination with the wire D, the bell-crank lever B, and rod C, all constructed to operate substantially as and for the purpose described.

2. The rod C, lever B, weight G, wire D, and arm E, in combination with the tank F, provided with the bottom plate, J, having the slotted tube *j*, the timbers H, and the plate I, provided with the bench-bar *i*, all constructed and combined to operate substantially as and for the purpose set forth.

Witnesses:
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