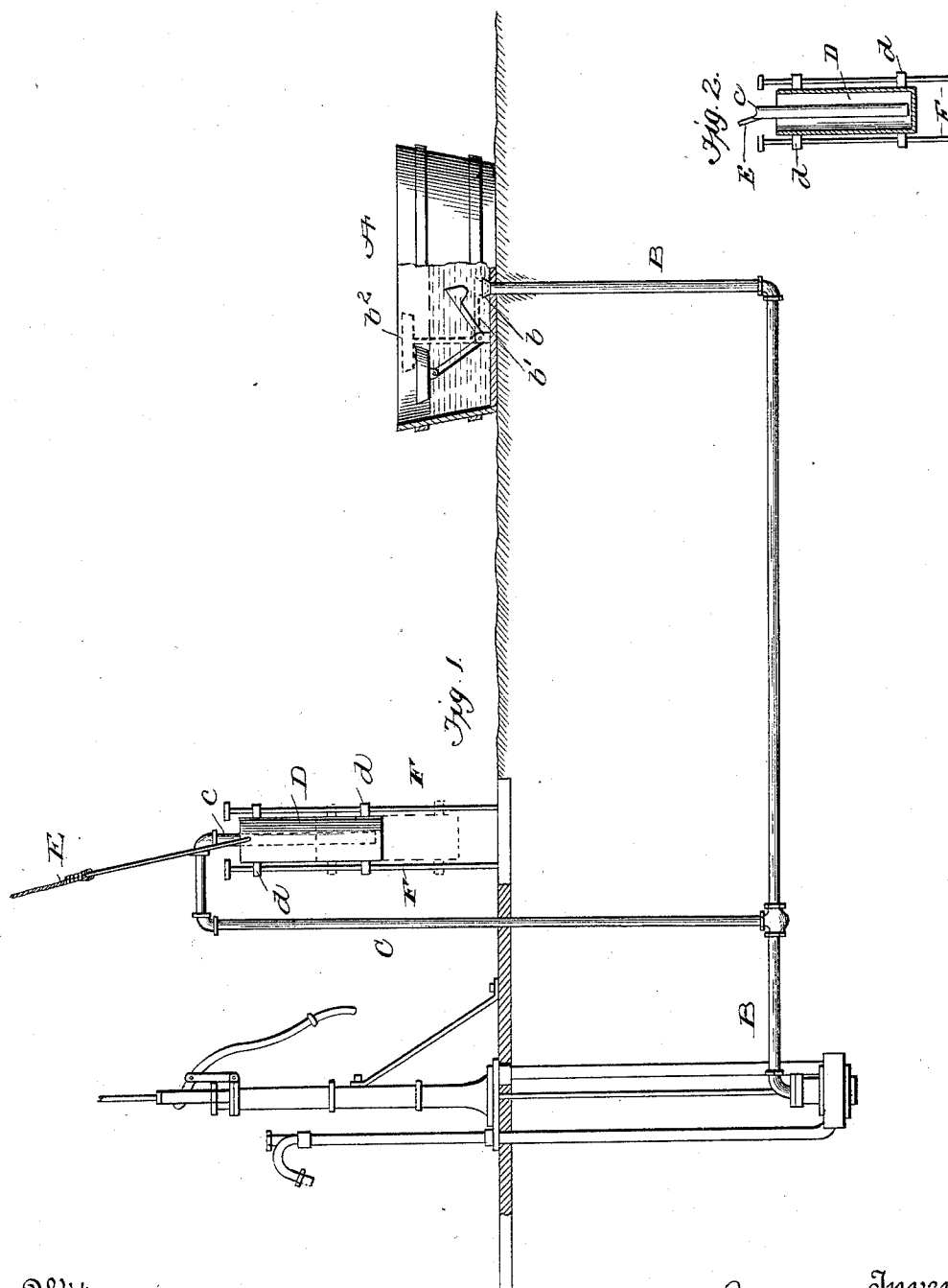


(No Model.)

S. K. PORTER.
WINDMILL REGULATOR.

No. 509,763.

Patented Nov. 28, 1893.



Witnesses

John Irvine
Charles Bernard

Inventor

Sylvester K. Porter

By *his* Attorney

Frank R. Jones

UNITED STATES PATENT OFFICE.

SYLVESTER K. PORTER, OF SENECA, MICHIGAN.

WINDMILL-REGULATOR.

SPECIFICATION forming part of Letters Patent No. 509,763, dated November 28, 1893.

Application filed April 28, 1892. Serial No. 430,991. (No model.)

To all whom it may concern:

Be it known that I, SYLVESTER K. PORTER, a citizen of the United States, residing at Seneca, in the county of Lenawee and State of Michigan, have invented certain new and useful Improvements in Windmill-Regulators; 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 appertains to make and use the same.

My invention relates to certain new and useful improvements in windmill regulators and has for its object to provide a device which will automatically throw the windmill out of operation when the tank or reservoir is filled and thus cause a cessation of the action of the pump until water is withdrawn from the tank, when the windmill is automatically thrown again into action and the tank refilled.

To this end my invention consists in interposing between the pump and tank a siphon connected with the pipe leading from the pump to the tank and suspending below said siphon a vessel, connected by means of a cord, wire or chain, with the windmill, and providing the tank with a float valve, whereby, when the tank is filled, the water will rise in the siphon and fill the vessel causing the latter to drop and thus throwing the wheel out of action and stopping the pump, and upon water being withdrawn from the tank the siphon empties the vessel and the latter being relieved of the weight of the water is raised by the windmill which is again thrown into action and actuates the pump to refill the tank.

Figure 1 is a view illustrating my improved regulator together with the tank, the pump and wind mill not being shown. Fig. 2 is a detail of the bucket or vessel which acts as a regulator.

Referring to said drawings the letter A indicates the tank and B the pipe leading from the pump to said tank. Connected to the pipe B by a T or other suitable coupling is a siphon C, the short arm *c* of which is at a higher level than the tank B. Immediately below the arm *c* of the siphon is an open bucket or vessel D, to the bail of which is secured one

end of a cord, wire or chain E, the other end of said cord being secured to the usual mechanism for throwing the windmill out of action. The bucket or vessel D is provided upon opposite sides with loops or eyes *d, d*, which pass over two standards F, F, between which the vessel rises and falls and by which the vessel is guided.

The tank A is provided with a valve *b* carried by a pivoted lever *b'* to the upper end of which is attached a float *b²*.

The operation of the regulator will be readily understood. When the tank becomes nearly filled with water the float *b²* is raised closing the valve *b* and as the pump continues to force water into the pipe B it is forced up in the siphon and empties into the bucket or vessel D. As the bucket fills with water it falls owing to its increased weight, and draws down the cord, wire or chain E which throws the windmill out of action and the pump ceases to work. When sufficient quantity of water is withdrawn from the tank to reduce the level of the water therein, the float valve *b*, opens. The siphon then operates to partially empty the bucket or vessel into the tank. Thereupon the weight of the bucket being reduced, the weight of the wind vane or a suitable weighted lever or other like means raises the bucket and permits the wheel to be thrown into the wind. The operation is then repeated and the tank filled until the float valve closes and the bucket is filled when it again throws the wheel out of the wind as before described.

By means of my improved regulator the services of an attendant are entirely dispensed with, the device being entirely automatic in its operation and always maintaining a uniform level of water in the tank.

Having described my invention, what I claim is—

1. In a windmill regulator, the combination with a tank provided with a float valve and the pipe leading therefrom to the pump of a siphon connected to said pipe, a vessel suspended beneath said siphon, and a cord, wire or chain secured to said vessel and to mechanism for throwing the windmill out of action, substantially as described.

2. In a windmill regulator, the combination
with the tank A provided with a float valve
b and the pipe B leading therefrom to the
pump, of the siphon C connected to said pump
5 the bucket D arranged beneath the short arm
of said siphon and provided with eyes or loops
d, d, the standards F, F, arranged upon oppo-
site sides of said bucket and passing through
said eyes or loops, and a cord, wire or chain
10 E secured at one end to said bucket and at

the other end to mechanism for throwing the
windmill out of action, substantially as de-
scribed.

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

SYLVESTER K. PORTER.

Witnesses:

R. B. ROBBINS,
JOHN E. BIRD.