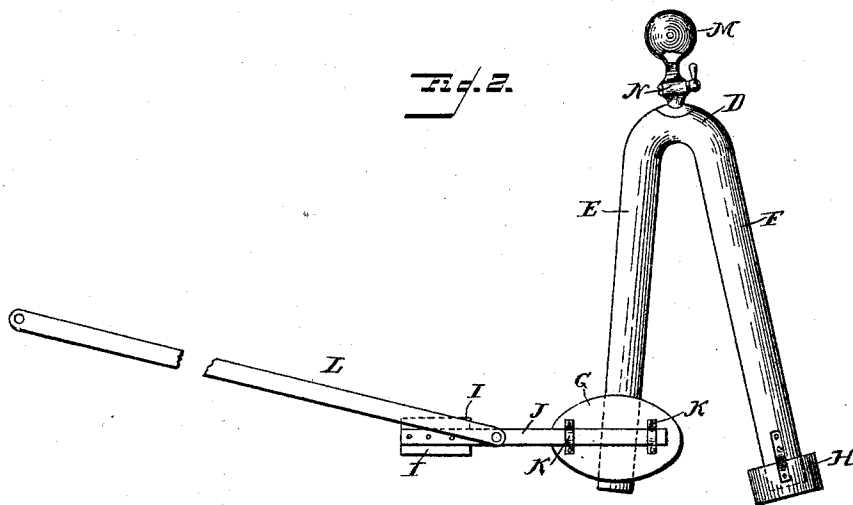
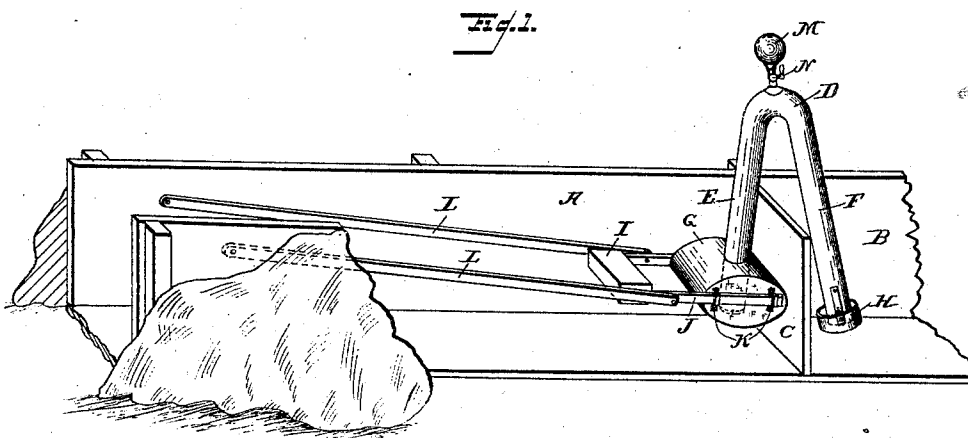


(No Model.)

H. L. DECKER.
SIPHON MODULE.

No. 468,596.

Patented Feb. 9, 1892.



Witnesses

C. E. Hunt.
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UNITED STATES PATENT OFFICE.

HERMAN L. DECKER, OF DEL NORTE, COLORADO, ASSIGNOR OF ONE-HALF
TO JOHN W. SMITH, OF SAME PLACE.

SIPHON-MODULE.

SPECIFICATION forming part of Letters Patent No. 468,596, dated February 9, 1892.

Application filed June 18, 1891. Serial No. 396,772. (No model.)

To all whom it may concern:

Be it known that I, HERMAN L. DECKER, a citizen of the United States, residing at Del Norte, in the county of Rio Grande and State of Colorado, have invented certain new and useful Improvements in Irrigating Head-Gates; 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 devices for delivering water from an irrigating canal or sluice to lateral distributing-channels and measuring the water so delivered by regulating the quantity supplied according to the consumption negotiated for.

The invention has for its object to combine a siphon for delivering the water with a float, which will buoy and sustain the siphon when full of water, so as to keep the mouth of the upper leg of the siphon the same distance under the surface of the water at all times and cause the lower leg of the siphon to always bear the same relative position to the mouth of the upper leg, whereby the flow of water will be the same at all times.

To the accomplishment of the foregoing and such other objects as may hereinafter appear the invention consists in the construction and the combination of parts hereinafter particularly described and claimed, reference being had to the accompanying drawings, forming a part hereof, and in which—

Figure 1 is a perspective of an irrigating-ditch or sluiceway, showing my invention applied thereto. Fig. 2 is a side elevation, on an enlarged scale compared with Fig. 1, of the siphon and its float and holding-arms.

In the drawings, the letter A designates an irrigating-ditch or sluiceway, and B may represent a portion of the same or a distributing-channel separated by a suitable division—for instance, by a division-plate C. A siphon D is made to have one leg E in the ditch and the other leg F in the distributing-channel, so that the water may be by siphonic action taken from the ditch and delivered to the distributing-channel. This siphon is made of any suitable material and the dimensions of the same will be such that it will deliver

the quantity of water to meet the consumption negotiated for. In order that there may be a regular delivery to the distributing-channel from the supply or irrigating-ditch and not a variable supply dependent upon the volume or depth of water in the ditch, it is necessary to keep the mouth of the upper leg E always at the same distance below the surface of the water in the irrigating-ditch and to have the lower leg F always bear the same relative position to the mouth of the leg E. To effect that result, I connect the leg E of the siphon to a float G of any suitable material and of dimensions proportionate to the size of the siphon employed, the leg E preferably passing through the float and having its mouth below the under surface of the float, as illustrated. It will thus be apparent that the siphon will be supported by the float and rise and fall with it as the float rises and falls with the body of water in the ditch or sluiceway, and in that way the mouth of the leg E will always be the same distance under the water and the relative position of the mouth and delivery ends of the siphon always maintained. The delivery end of the siphon or its leg F is provided with a vessel H, of any suitable material, preferably supported from the leg and having the end of the leg below the top of the vessel, so that the vessel will contain water sufficient to cover the mouth of the delivery-leg, and thus prevent air passing up the leg or the proper action of the siphon interfered with in the rise and fall of the siphon.

The float G is weighted so as to counter-balance the weight of the siphon. The preferred means for accomplishing that end is an auxiliary float I, which may be a block of wood or other suitable material connected to arms J, extending laterally from the float G, and suitably connected to the latter preferably by passing the arms through loops K, attached to the ends of the float.

The float G is anchored in a manner that will prevent it from shifting loosely about, but will permit it to rise and fall. The preferred manner is by the employment of the arms L, having at one end a pivotal connection with a portion of the float—for instance, by pivoting them at one end to the arms J—and

at the other end to any suitable support—for instance, to the sides of the sluiceway or irrigating-ditch, as illustrated in Fig. 1. Such construction will allow the float to freely rise and fall with the water in the ditch and yet prevent it from floating loosely about in the sluiceway.

The siphon is provided on top with an air-chamber M, detachably secured to a cock N, through which communication is established between the air-chamber and siphon. When the siphon is to be started, the air-chamber is removed, and by means of an air-pump the air is sucked out of the siphon when the cock is turned to close the communication with the siphon, and the siphon then begins to act. The air-chamber M, filled with water or other liquid, is then attached to the cock and the cock opened, so that the liquid in the air-chamber will pass into the siphon and rest upon the water therein. Any bubbles of air that may rise from the water passing through the siphon will pass up into the air-chamber and thus be prevented from checking or retarding the flow of water through the siphon.

It is apparent that by proportioning the parts so that a given quantity of water will flow through the siphon in a given time the amount of water consumed is predetermined and each consumer is supplied with the quantity negotiated for.

The device will deliver the water regularly in a continuous stream as the siphon is automatically adjusted with the increase or decrease in the volume of water in the sluice, and consequently the flow or supply cannot vary as it would if the mouth of the leg E was at times farther below the surface of the water than at other times or not so far.

I have described with particularity what I consider the best construction of parts for carrying out my invention; but I do not intend to be restricted to such details which are given merely as an illustration of the best means now

known to me for carrying the invention into effect. It is also apparent that the proportions, shape, and material of which the parts are made may be varied to suit judgment or conditions.

Having described my invention and set forth its merits, what I claim is—

1. In a device for measuring liquid taken from a supply-conduit, the combination, with said conduit, of an automatically-adjusting siphon having one leg in said conduit and the other on the outside thereof, the ends of both legs being held in the same relative position to each other and one at a uniform depth below the surface of the liquid in the conduit by the automatic adjustment of the siphon, substantially as described.

2. In a device of the character described, the combination, with the liquid-conduit, of a siphon and a float carrying the siphon to raise and lower the same and maintain the relative position of the two ends of the siphon and one end at a uniform depth below the surface of water in the conduit, substantially as described.

3. In a device of the character described, the combination, with the liquid-conduit, of the siphon, the float carrying the same, and a weight for counterbalancing the siphon, substantially as described.

4. In a device of the character described, the combination, with the liquid-conduit, of the siphon, the float carrying the same, the weight secured to the same to counterbalance the siphon, and the hinged arms having a pivotal connection between the weight and the float, substantially as described.

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

HERMAN L. DECKER.

Witnesses:

WM. M. KEIGHTLEY,
H. R. YORK.