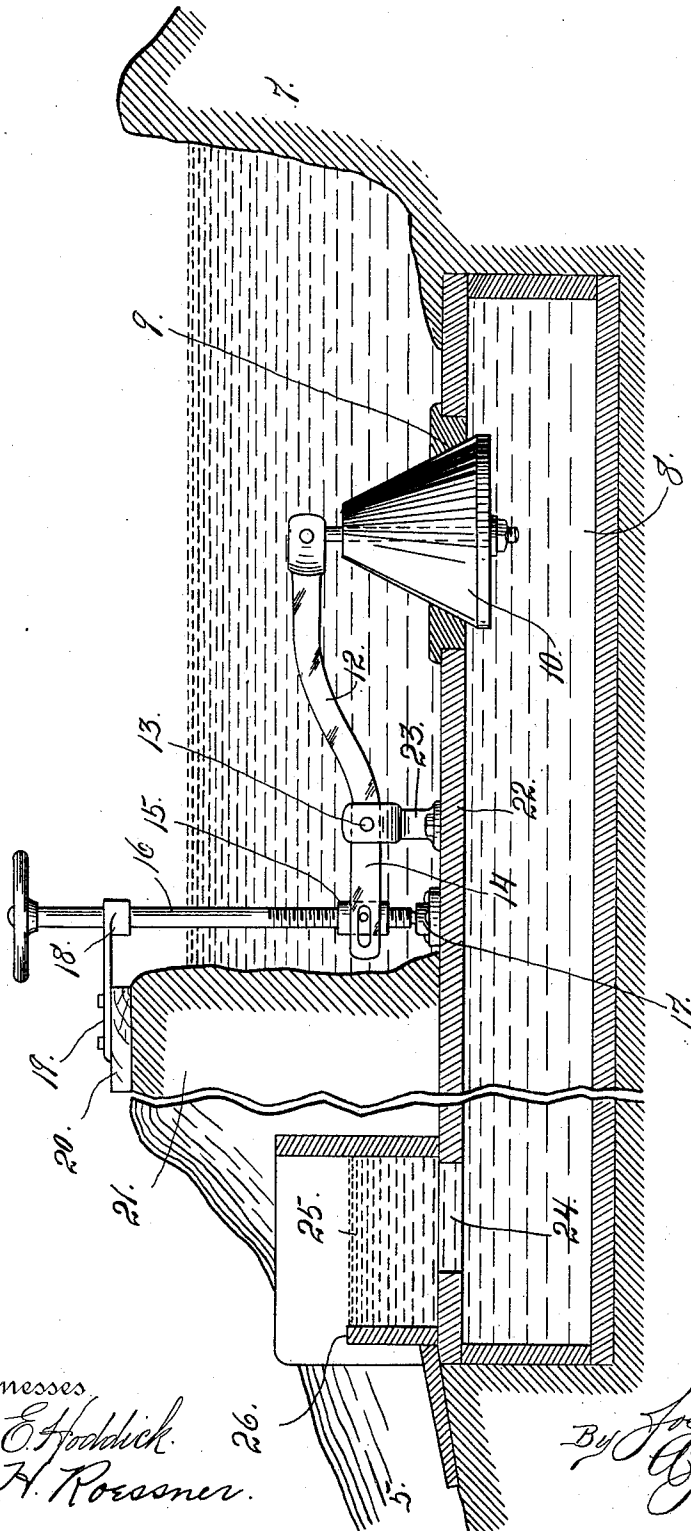


J. H. COPE.
IRRIGATING HEAD GATE.
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1,056,006.

Patented Mar. 18, 1913.



Witnesses
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UNITED STATES PATENT OFFICE.

JOSEPH H. COPE, OF WINDSOR, COLORADO.

IRRIGATING HEAD-GATE.

1,056,006.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JOSEPH H. COPE, a citizen of the United States, residing at Windsor, county of Weld, and State of Colorado, have invented certain new and useful Improvements in Irrigating Head-Gates; and I do 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, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

My invention relates to improvements in irrigating headgates, adapted for use either at the main ditch or canal or upon the field of the water consumer, as may be desired.

My object is to avoid taking water from the ditch or lateral through the bank as is the practice where ordinary headgates are employed. This practice is objectionable for the reason that it is difficult to prevent the water in the ditch from washing out the earth around the gate, whereby leakage from the ditch around the gate results; and it is evident that as soon as a leak is started, the tendency is for it to increase, since the water will continually enlarge an opening in the bank through which it flows. I avoid or overcome this difficulty by taking the water from the bottom of the ditch and causing it to pass through a casing or flume located below the bottom, the said casing being closed at the top except where openings are made for the entrance and exit of water. An opening is made in the top of the flume to allow the water from the ditch or lateral to enter, and another opening is made in the top of the flume beyond the bank to allow the water from the flume to rise upwardly into a pool where the water is in a comparatively quiescent state, and from which it passes over a weir suitably arranged for the purpose.

Having briefly outlined my improved construction, I will proceed to describe the same in detail, reference being made to the accompanying drawing in which is illustrated an embodiment thereof.

In this drawing: the figure is a cross section taken through a canal, showing my improved device in use.

Let the numeral 5 designate a ditch or canal having banks for retaining the water. It may be assumed that this ditch 5 is on

the land of the consumer and that the water is entering the ditch from the main canal 7, the latter being provided with a flume 8, extending underneath the ditch and having an outlet opening 9 controlled by a cone-shaped valve 10 connected with a lever 12 fulcrumed at 13 and having its short arm 14 connected as shown at 15 with a vertically arranged screw-shaft 16 journaled at its lower extremity in a step-box 17, while its upper portion passes through a sleeve 18 formed at the outer extremity of an arm 19 anchored to a stationary support 20 located on top of a bank 21 of the canal. The top 22 of the flume forms a support for a bracket 23 in which the fulcrum pin 13 is located. This top member of the flume also supports the step box in which the lower extremity of the screw shaft 16 is journaled.

In the top of the flume beyond the bank 21, is formed an opening 24 through which the water rises and forms a weir pool 25 and passes over the weir or dam 26 into the consumer's ditch 5.

It is evident that by manipulating the screw-shaft 16, to depress the valve 10, any desired amount of water may be taken from the canal 7. This water may be measured where it passes over the weir 26 and the valve 10 may be adjusted in order to give the consumer the desired number of inches of water.

In any event where my improved construction is employed, the water is always taken from the bottom of the ditch, carried through a flume under the bank thereof, whence it passes upwardly into a weir pool, and thence over the weir, where it can be accurately measured.

Having thus described my invention, what I claim is:

1. The combination with an irrigating ditch having an abutment against which the water impinges, of means for removing the water from said ditch, comprising a flume extending beneath the bottom of the ditch and having an opening to permit the entrance of water from the ditch, a weir pool located beyond the abutment, the flume having an opening communicating with the said weir pool, a cone-shaped valve for controlling the passage of water to the weir pool through the inlet opening in the flume, the said cone-shaped valve projecting upwardly through the said inlet opening in the flume, whereby the weight of the cone-

shaped valve has a tendency to open the inlet opening, and means for manipulating the valve, substantially as described.

2. The combination with an irrigating
5 ditch having an abutment against which the water impinges, of means for removing the water from the said ditch, comprising a flume extending beneath the bottom of the ditch and having an opening to permit the
10 entrance of water from the ditch, a cone-shaped valve for controlling said opening, the said cone-shaped valve projecting upwardly through the said inlet opening of the flume, whereby the weight of the cone-
15 shaped valve has a tendency to open the inlet opening, and means for manipulating the valve, substantially as described.

3. The combination with an irrigating
20 ditch having an abutment against which the water impinges, of means for removing

water from said ditch comprising a flume extending beneath the abutment, and having an opening communicating with the ditch to permit the entrance of water from the ditch, a weir pool located beyond the
25 abutment, the flume having an opening communicating with the said weir pool, a cone-shaped valve projecting upwardly through the said first named opening for controlling the passage of the water from
30 the ditch into the flume, and means for manipulating the valve, substantially as described.

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

JOSEPH H. COPE.

Witnesses:

VIRGINIA I. DAVIS,
A. EBERT O'BRIEN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."
