J. E. BARIEAU.

CONSTANT DISCHARGE IRRIGATION MODULE.

APPLICATION FILED SEPT. 17, 1913.

1,108,090.

Patented Aug. 18, 1914.

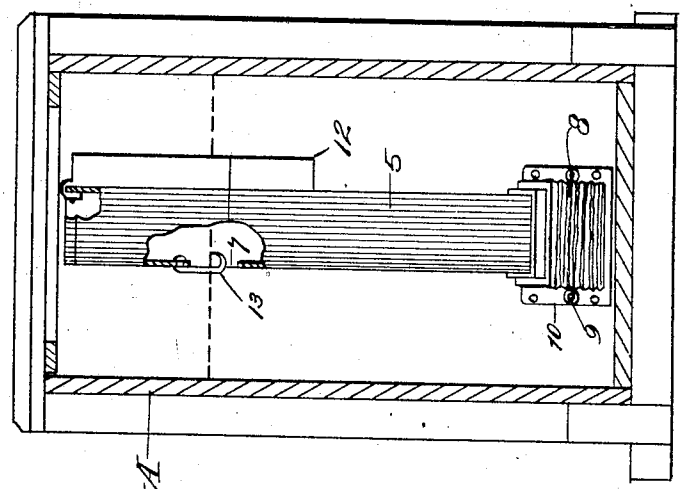


Fig. 2.

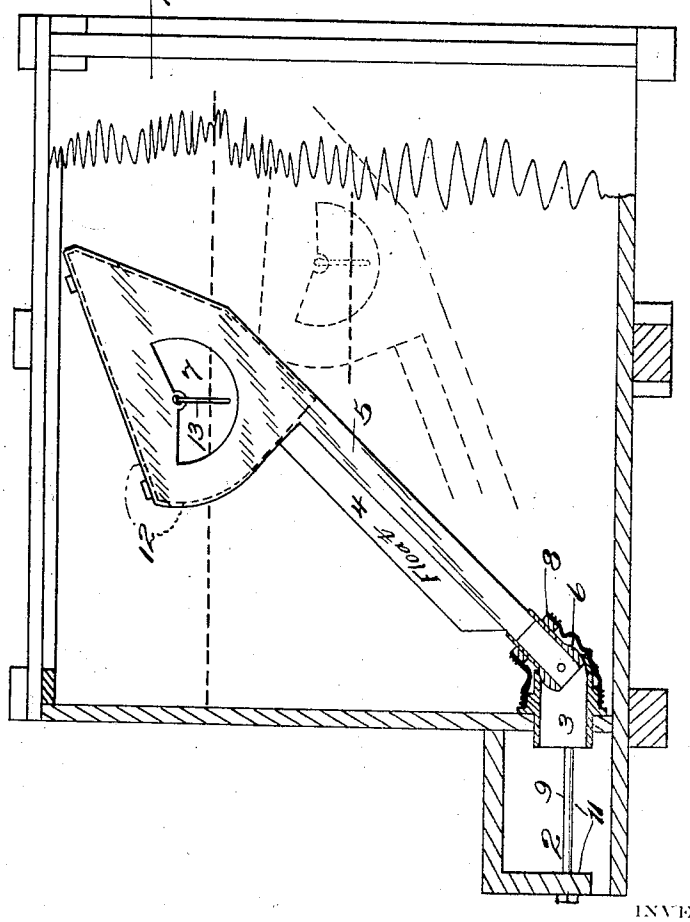


Fig. 1.

WITNESSES:

F. E. Maynard.

Frances V. Cole

INVENTOR

Jerome E. Barieau,

BY G. H. Strong.

ATTORNEY

UNITED STATES PATENT OFFICE.

JEROME E. BARIEAU, OF COLFAX, CALIFORNIA.

CONSTANT-DISCHARGE IRRIGATION-MODULE.

1,108,090. Specification of Letters Patent. Patented Aug. 18, 1914.

Application filed September 17, 1913. Serial No. 790,376.

To all whom it may concern:

Be it known that I, JEROME E. BARIEAU, a citizen of the United States, residing at Colfax, in the county of Placer and State of California, have invented new and useful Improvements in Constant-Discharge Irrigation-Modules, of which the following is a specification.

This invention relates to an apparatus for controlling the outflow of water from a canal or reservoir.

The object of the present invention is to provide a device for discharging a constant quantity of water from canals or reservoirs regardless of fluctuations of water surface level in the same. The desired discharge is obtained by regulating the weight in a weight chamber.

The invention consists of the parts and the construction and combination of parts as hereinafter more fully described and claimed, having reference to the accompanying drawings, in which—

Figure 1 is a side elevation of the movable weir, showing a suitable casement in vertical section. Fig 2 is an end view of the weir from within the casement.

A represents a tank, reservoir, or water conduit in which the water level may be constantly varying, or from which reservoir or conduit it is desired to maintain a constant and uniform quantity of discharge. Such an object is particularly desirable and necessary in mining and irrigating where the customers of water companies contract for a definite number of inches of water; and where water is scarce, it is important to the company to deliver just the quantity contracted for. Without some means, as hereinafter described, the quantity supplied will vary with th season, or with the rise and fall from any and numerous causes of the water in the reservoir, canal or ditch. I shall speak of the reservoir or conduit A simply as a container.

2 is the outlet for the discharge water, which outlet is in communication with the interior of the container A through a flanged coupler 3, float 4, tubular stem 5 and flexible joint 6.

The essential feature of the invention is the float 4 with its means for accommodating itself to the varying surface level of the water in the conduit A, so as to always deliver a uniform quantity of water into the discharge 2. To this end the float 4 has a circular opening 7 which insures a constant form of discharge stream regardless of the angle of flotation and the float is so designed as to maintain a constant head through the opening 7 regardless of the angle of flotation. The flexible joint 6 between the tubular stem 5 and the coupling 3 is designed to allow the freest up and down movement of the float and at the same time being maintained water tight by a water-proof leather or equivalent cylindrical section 8 connecting the lower end of the stem 5 with the union 3. This union 3 is of simple construction and readily applied by simply inserting it through a hole of proper size on the inside of the container A and drawing it up tight and holding it in place by a draw bolt 9 passed through a web 10 of the union 3 and shouldering against a suitable outside brace 11.

In operation the float rises and falls with the changing water level in the container A; the arcuate opening 7 being of such size and position as to permit the flow into and through the float of a pre-determined volume of water, and at the same time maintain a constant volume due to the fact that the arcuate edge of the opening and the chord formed by the water level, remain relatively constant irrespective of the oscillations of the float within all reasonable and practical limits of water level in the container. The volume can be arbitrarily changed at any time by varying the ballast in the weight box 12; the head of water flowing through the opening 7 being determined by a simple hook gage 13 of well-known type.

Having thus described my invention what I claim and desire to secure by Letters Patent is—

1. In combination with a liquid container having an external discharge and having an opening in a wall thereof, which opening connects the discharge and container interior, a flanged coupler which projects through said opening and into the discharge, a bolt passed through the flange of the coupler through said container wall and through the discharge to draw the flange against said wall, and a float having a stem which is flexibly connected to said coupler.

2. In combination with a liquid container having a discharge, a float therein, a flexible connection between said float and discharge, said float having an inlet opening formed in one of the side walls of the head

hereof and between the ends of said head, which opening is of semi-circular shape at its lower portion, and a weight box secured to the opposite side wall of the head of the float adapted to weight the float so that the surface of the water in the container forms a chord which extends across said opening in spaced relation to the top of the opening.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

JEROME E. BARIEAU.

Witnesses:
E. W. HAFFEY,
NION R. TUCKER.

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