

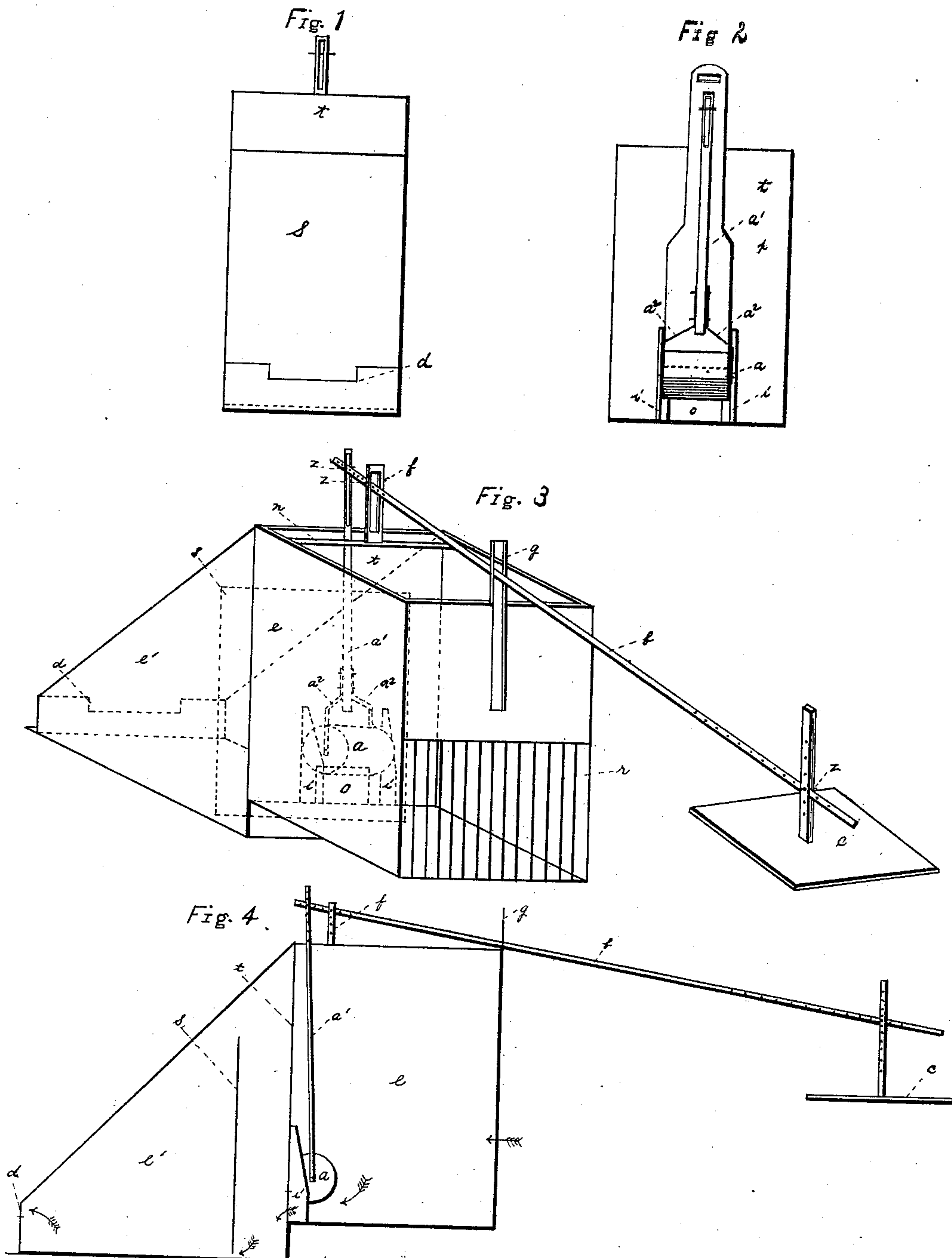
(No Model.)

C. N. TIBBITTS.

DEVICE FOR AUTOMATICALLY GAGING THE FLOW OF WATER.

No. 334,095.

Patented Jan. 12, 1886.



WITNESSES

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UNITED STATES PATENT OFFICE.

CHARLES N. TIBBITTS, OF DENVER, COLORADO.

DEVICE FOR AUTOMATICALLY GAGING THE FLOW OF WATER.

SPECIFICATION forming part of Letters Patent No. 334,095, dated January 12, 1886.

Application filed March 12, 1885. Serial No. 158,536. (No model.)

To all whom it may concern:

Be it known that I, CHARLES N. TIBBITTS, a citizen of the United States, residing at Denver, in the county of Arapahoe and State of Colorado, have invented a new and useful Device for Automatically Measuring Water, of which the following is a specification, reference being had therein to the accompanying drawings.

10 My invention relates to improvements in devices for automatically regulating the area of any opening through which water is drawn from a reservoir or other source, so that the quantity of water which passes through the
15 opening will be constant and unvarying under the fluctuations or rise and fall of the water supply or source, and also to a partition so arranged in a box made to convey the water from the opening through which the water is
20 drawn to the weir, that the water is compelled to pass under said partition, thereby washing the sediment out of the box, and also to deaden the water at the weir.

25 My invention is especially adapted for regulating and gaging the water to be supplied from a canal, ditch, reservoir, or other source for purposes of irrigation.

30 My invention consists of a roller or cylinder attached by an upright piece to one end of a lever, which lever has attached to the other end a float, said lever and upright piece attached to the roller, and the attachment of the float to the lever being so constructed that they may be adjusted so as to set the roller,
35 so as by watching the flow of the water at the weir or orifice that it may so reduce or increase the area of the opening behind the roller, thus giving the desired quantity of flow under the different heads of water. The roller
40 is thereafter raised or lowered automatically by the fluctuations of the water in the canal, ditch, or water-source.

45 Figure 1 is a front view of my device, showing the weir and partition. Fig. 2 is a view of my device showing the roller and head-gate. Fig. 3 is a perspective view of the whole apparatus used in connection with my device. Fig. 4 is a side view of the same.

50 Similar letters refer to similar parts in the different views.

In the drawings, *a* is the roller by which the flow of water is regulated.

a' is the upright piece attached to the roller *a*.
b is a lever adjustably attached to the upright part *a'* by means of a pin or bolt. 55

c is a float adjustably attached to the lever *b* with a pin or bolt.

d is a weir.

e is that portion of the box through which the water is conducted to the opening behind 60 the roller.

e' is that portion of the box conducting the water to the weir *d*.

f is an upright piece with a slot through which the lever passes, also adjustably attached by a pin or bolt, thus forming a fulcrum. 65

g is a guide for the lever *b*, allowing the lever a free vertical movement, but no lateral movement.

o is the opening behind the roller *a*, the area 70 of which is regulated by the roller *a*.

a² a² are two arms bolted to the upright piece *a'*, between which the roller revolves on journals, thus reducing the friction to a minimum. 75

i i are two upright parts or wings, one attached to each side of the opening *o*, which prevents the roller from having any lateral movement, but allows it a free vertical movement, also forming the cutting-off point of the 80 water at the lowest point of the roller *a*.

p, as shown in Fig. 2, is a head-gate, the principal use of which is to shut off the water entirely when so desired.

r is the grating through which the water is 85 admitted to that portion of the box *e*, and designed to prevent large obstacles from passing through and clogging up the opening *o*.

s is the partition in that portion of the box *e'*, so fastened to the sides of the box and leaving a space between its bottom and the bottom of the box *e'* slightly greater in surface inches than the opening over the crest of the weir *d*, thus giving the water a velocity over the bottom of the box *e'*, preventing the accumulation of sediment, then allowing the water to well up gently to its point of measurement at the weir *d*. 90

t is that part of the box *e* in which the opening *o* is made, and to which are attached the wings *a² a²*. 100

n is the cross-piece on which the upright part *f* is placed, and with the ends resting on the sides of that part of the box *e*.

x , y , and z are pins or bolts passing through holes in the lever b , the upright piece a' , the upright part f , and the upright part of float c .

In the operation of my invention, float c , resting upon the water in the canal, ditch, or water-source, is raised or lowered by the fluctuations of the water, and, being attached to the lever b , raises and lowers the roller, thus regulating the area of the opening o through which the water is measured or gaged. The upright part a' has a slot in the upper end, through which the lever b is extended, so that the end of the lever can be adjusted in the slot by means of the pin or bolt x inserted through holes in the upper end of the upright part a' and the end of the lever b . The upright part f also is made with a slot, so that the lever b passing through it can be adjusted by means of the pin or bolt y passing through holes in the upright part f and in the lever b , thus forming the fulcrum; also, the float c has an upright

part which is attached to the other end of the lever b , which can be adjusted up or down by means of the pin or bolt z passing through holes in the upright part of the float c and through the end of the lever b , and by changing the pins or bolts x , y , and z and placing them in different holes the roller a may be nicely adjusted.

What I claim as my invention, and desire to secure by Letters Patent, is—

In a device for automatically measuring or gaging water, the roller a , the arms a^2 a^2 , the upright part a' , the lever b , the float c , the guide g , the upright part f , the pins or bolts x , y , and z , the wings i i , and the partition s , substantially as described, and for the purposes set forth.

CHAS. N. TIBBITTS.

In presence of—

J. B. WILLSEA,

R. M. McDERMOTT.