

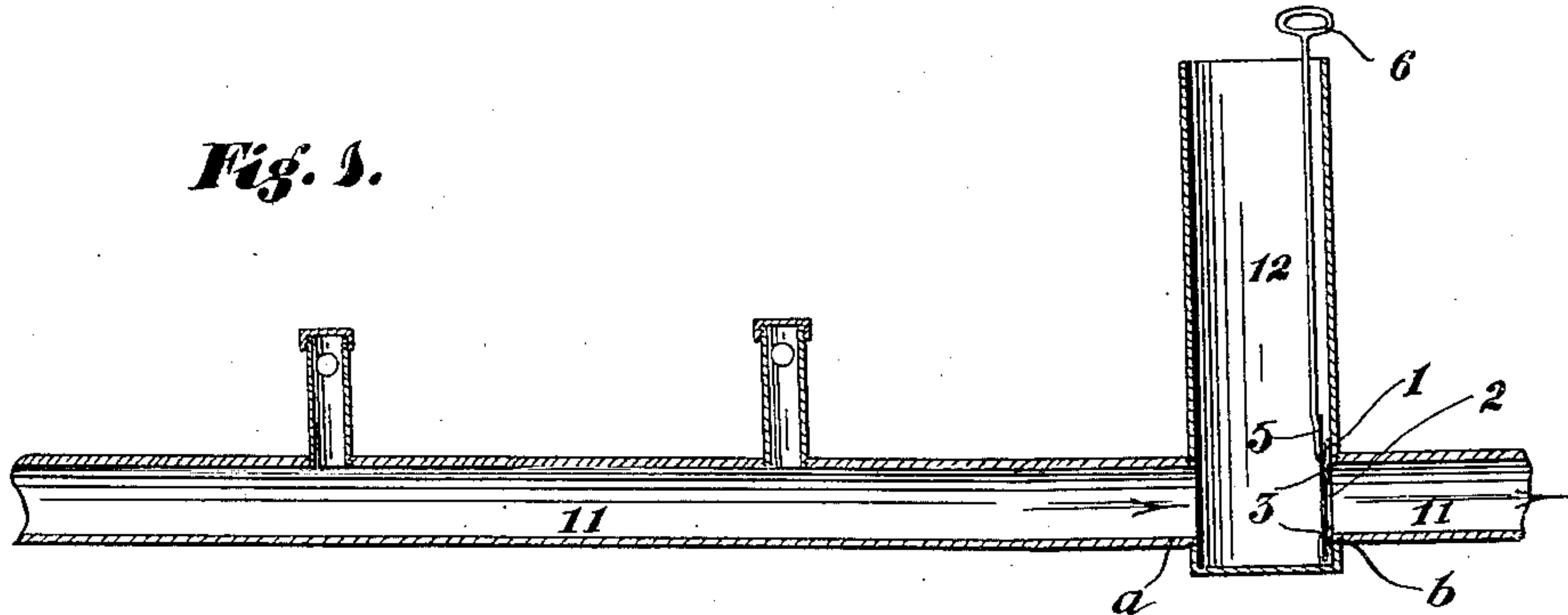
No. 863,764.

PATENTED AUG. 20, 1907.

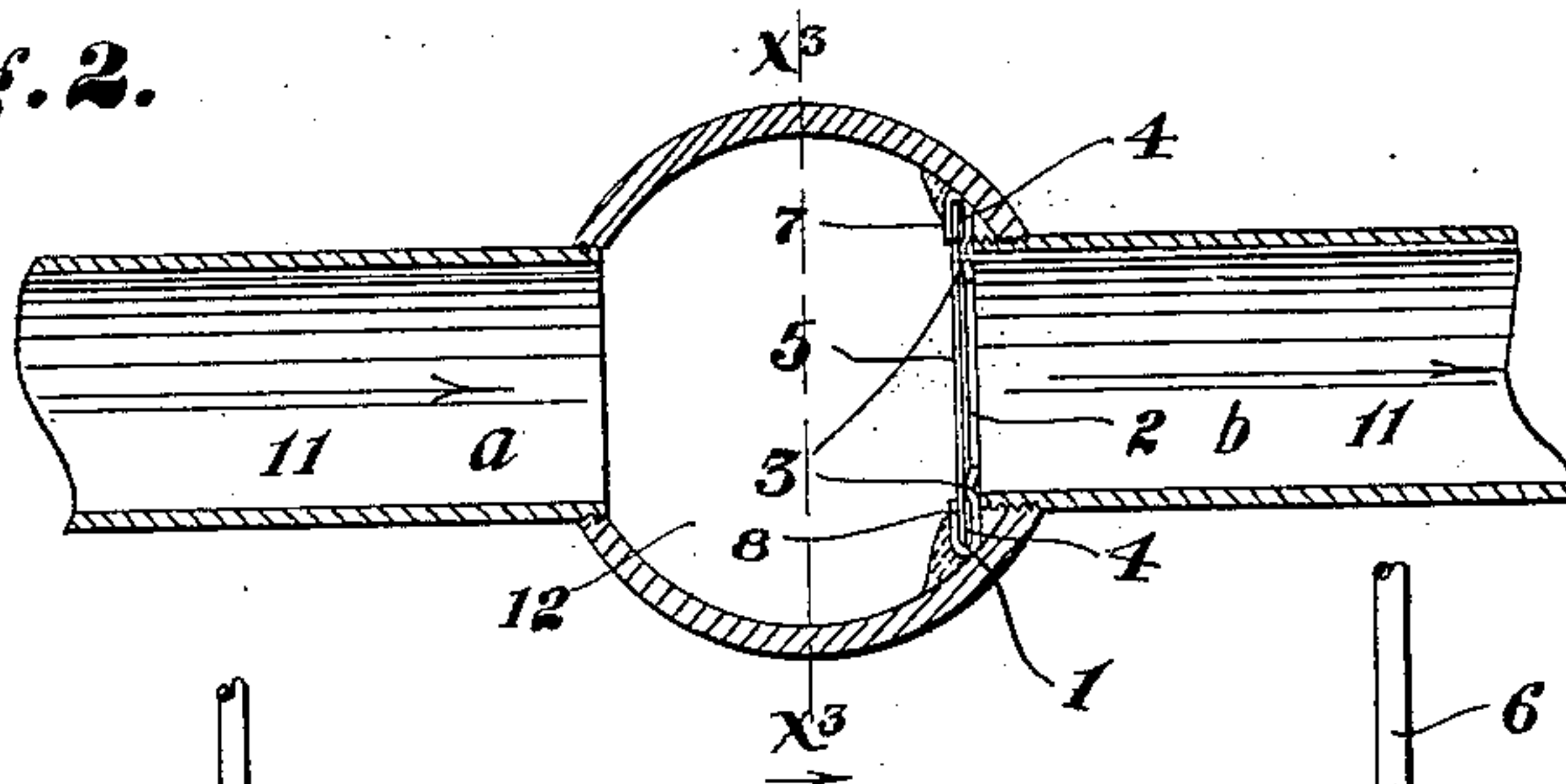
J. M. TAYLOR.  
IRRIGATION HEAD GATE.

APPLICATION FILED JUNE 19, 1905. RENEWED MAY 20, 1907.

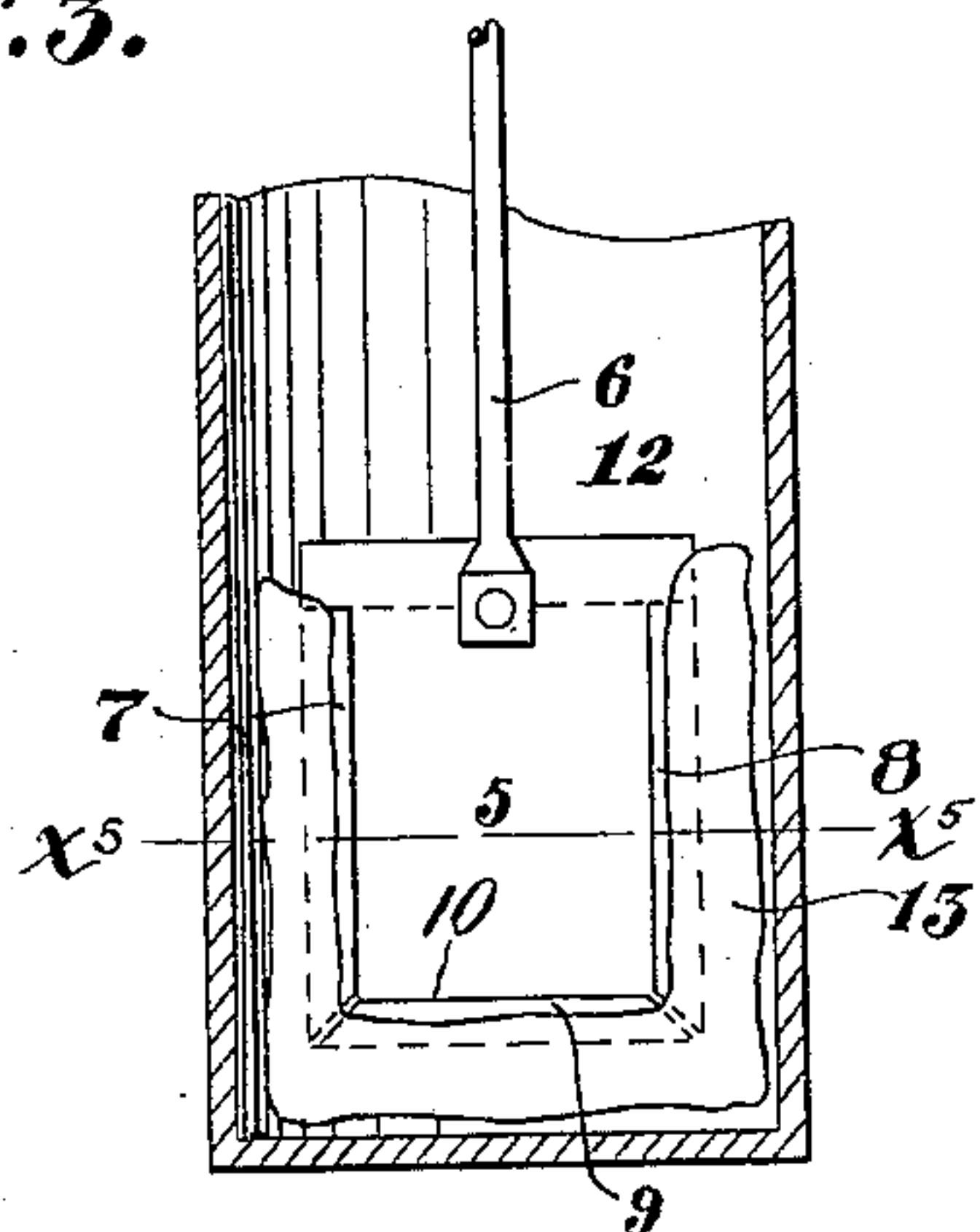
**Fig. 1.**



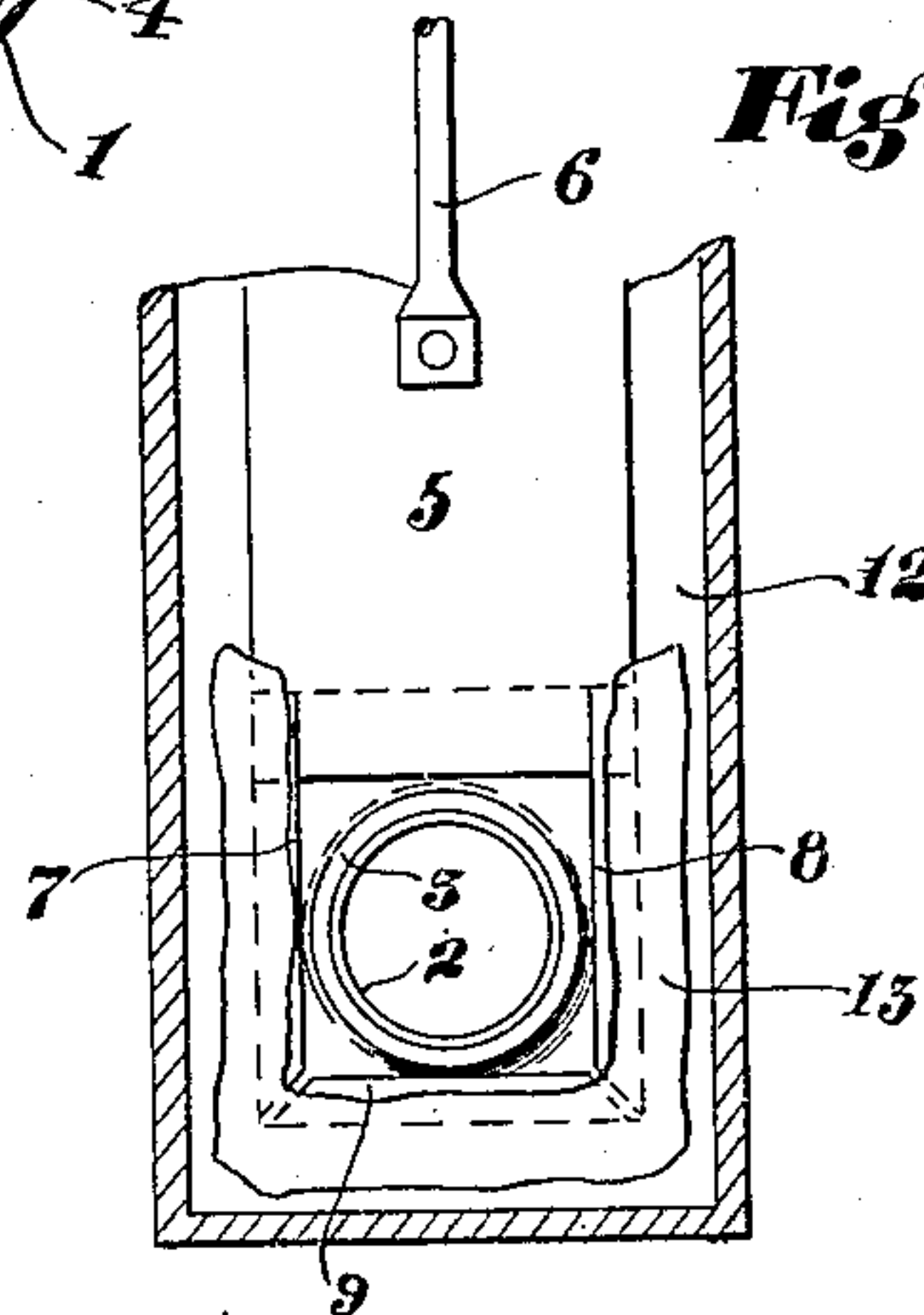
**Fig. 2.**



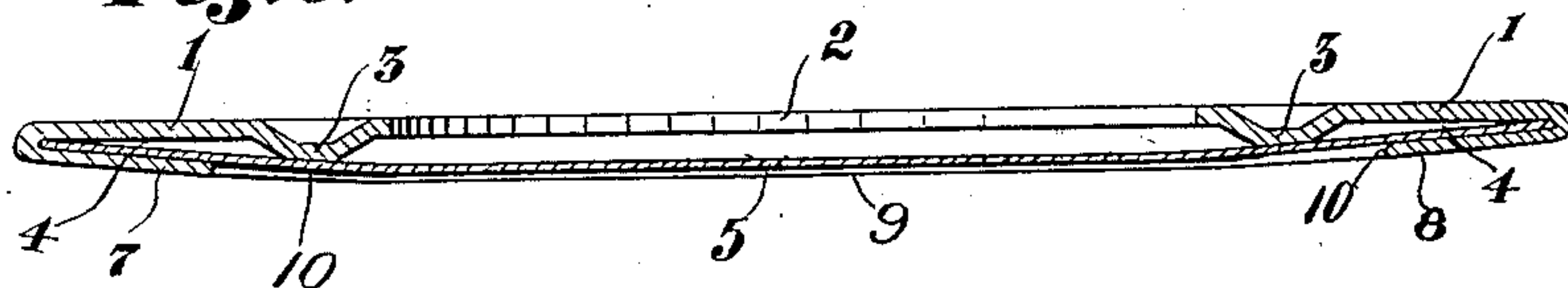
**Fig. 3.**



**Fig. 4.**



**Fig. 5.**



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# UNITED STATES PATENT OFFICE.

JAMES M. TAYLOR, OF WHITTIER, CALIFORNIA.

## IRRIGATION HEAD-GATE.

No. 863,764.

Specification of Letters Patent.

Patented Aug. 20, 1907.

Application filed June 19, 1905, Serial No. 265,928. Renewed May 20, 1907. Serial No. 374,755.

*To all whom it may concern:*

Be it known that I, JAMES M. TAYLOR, a citizen of the United States, residing at Whittier, in the county of Los Angeles and State of California, have invented a new and useful Irrigation Head-Gate, of which the following is a specification.

One object of this invention is to provide a cheap and simple head-gate which can be used in the stand-pipes of irrigating systems to bank up the water to cause it to flow through the outlets in the dees or other upright pipes leading up from the main irrigating pipe.

In southern California, some irrigating systems consist in an inclined main pipe or pipes of concrete, clay, or other material buried sufficiently in the ground to be out of the way of cultivation, and provided at requisite intervals with upright pipes which are in some instances cylindrical and in other instances D-shape, or of some other desired form, and are provided with outlets above the buried pipe through which the water is made to flow by temporarily closing the main pipe for that purpose.

The invention is also applicable to be used with a stuffing box for the stem which operates the gate, thus dispensing with the necessity of locating stand-pipes along the irrigating main. In the following specification reference will be more particularly made to the stand-pipe construction, but it is to be understood that the invention may be applied with a stuffing box around the stem of the handle which operates the gate.

The following drawings illustrate the invention, and referring thereto:—Figure 1 is a fragmental view of an irrigating system in which my invention is applied. Fig. 2 is an enlarged plan section of the stand-pipe in which my newly-invented head-gate is applied. Fig. 3 is an elevation of the head-gate viewed from the inside of the stand-pipe, a section of a fragment of which is shown; line  $x^3-x^3$ , Fig. 2, indicates the point of view looking in the direction of the arrow. Fig. 4 is a like view with the gate raised. Fig. 5 is an enlarged section on line  $x^5-x^5$ , Fig. 3.

1 is a head provided with a main opening 2 and a projection 3 on one face around the opening.

4 designates ways on opposite sides of the opening 2, and 5 a flexible sheet in the ways engaging the top of bead or projection 3 and movable there-across to open and close the opening. Sheet 5 may be provided with a handle 6 for operating the same.

The head 1 is preferably formed of a sheet of galvanized iron lapped over in laps 7, 8, at the two edges on one face of the sheet to form guiding means comprising the ways 4 for the gate 5 composed of the flexible sheet above referred to, which is also preferably of galvanized iron.

The projection 3 of the head is formed by a bead stamped in the sheet metal and projecting from the plane of the overlapped face, so that when the edges of the flexible sheet are in the ways formed by the lapped edges said sheet is held with a tension against the face of the bead.

9 indicates a lap formed at the bottom of the head by bending the sheet in the same manner as it is bent to form the ways 4. This affords a channel or seat into which the bottom of the gate may enter when the gate is fully closed down.

11 designates the main pipe of the irrigating system in which the water flows in the direction indicated by the long arrows in Figs. 1 and 2.

12 designates the stand-pipe in which the gate is mounted, the same being fastened against one end of the main pipe. The sections *a* and *b* of said main terminate in the stand-pipe 12 in the ordinary way, and the head 1 is placed against the open end of the outlet section *b* of the main and fastened in place by cement in the stand-pipe. The laps 7, 8 and 9 are of considerable width so as to hold the gate firmly and truly in place, and also to allow the head to be firmly fixed in the concrete or cement 13 without interfering with the resiliency of the laps.

It is to be understood that I do not limit the invention to the specific detailed construction shown, but may vary from the same without departing from the principle of the invention.

The head being placed on the outlet section *b* of the main 11, receives the pressure of the water in the section *a* of the main and in the stand-pipe 12, and when the flexible gate formed of the sheet 5 is closed, the pressure of the water forces the same firmly against the bead and closes the head-gate practically water tight. In practical operation the head-gate can be raised to partially or fully open the opening 2 to give the required head in the upper section *a* of the main.

What I claim is:—

1. A head-gate comprising a head formed of a sheet having a main opening therethrough and around such opening a bead projecting from the plane of the sheet, a flexible closure engaging the top of the bead to form a closure for the main opening, and guiding means for said closure.

2. A head-gate comprising a head formed of a sheet lapped at two edges on one face to form ways, and having a main opening and around such opening a bead projecting from the plane of the overlapped face, and a flexible sheet in the ways and engaging the bead to form a closure for the main opening.

3. A main provided with a stand-pipe, said main having sections opening into and from said stand-pipe, a head comprising a sheet furnished with a bead extending around the opening leading from the stand-pipe, and a

closure movable longitudinally of the stand-pipe across the top of said bead to open and close said opening leading from the stand-pipe.

4. A main, a stand-pipe for the main, a sheet metal  
5 head having a main opening, a bead around the opening and edges lapped to form ways, a concrete, cement or clay body constructed to hold the lapped edges, and a sheet in the ways to close the main opening.
5. A head gate comprising a head formed of a sheet  
10 lapped at three edges to form ways and a seat, and having

an opening between said ways and around such opening a bead; and a flexible sheet engaging in the ways adapted to seat in said seat and to engage the bead to form a closure for the opening.

In testimony whereof, I have hereunto set my hand at 15  
Los Angeles, California, this 10th day of June, 1905.

JAMES M. TAYLOR.

In presence of—

JAMES R. TOWNSEND,

JULIA TOWNSEND.