Nov. 11, 1952 G. D. WILLIAMSON 2,617,446

IRRIGATION VALVE

Filed May 16, 1951

Fig. 1

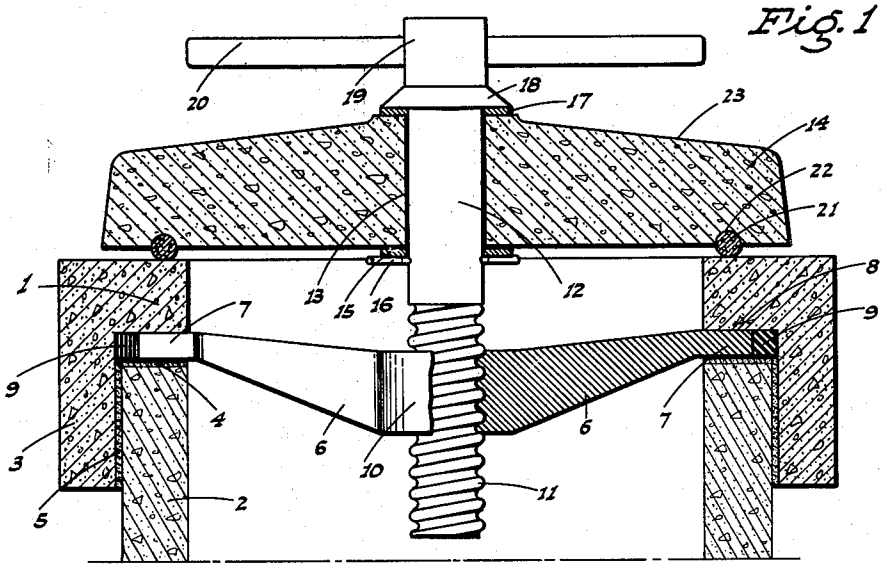


Fig. 3

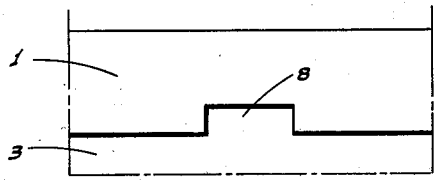
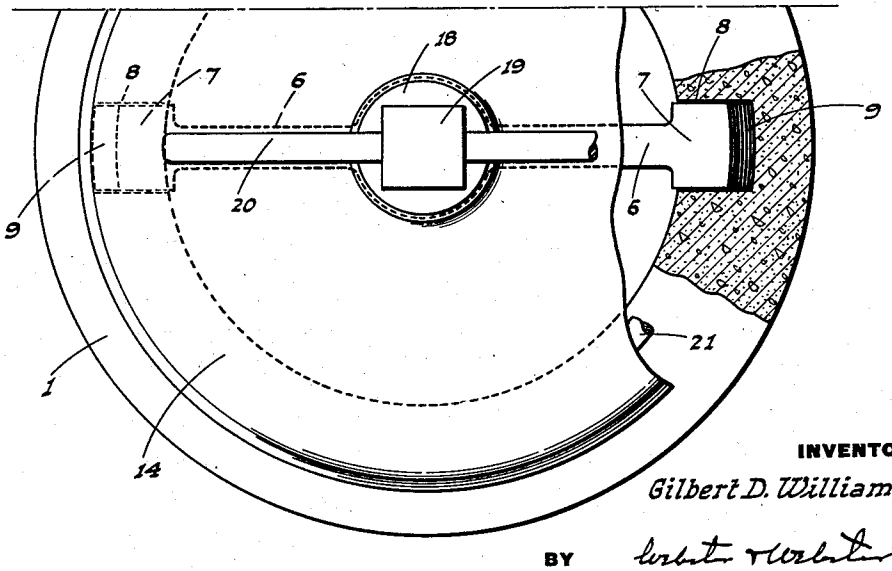


Fig. 2



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IRRIGATION VALVE

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2 Claims. (Cl. 137—737)

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This invention relates to an irrigation valve of the type adapted to be secured on the upper end of a water supply stand pipe; the latter extending to adjacent the surface of the ground from an underground pipe system.

A major object of the present invention is to provide an irrigation valve wherein the seat forming ring and the vertically adjustable lid thereabove are both of concrete; the advantages being that the use of costly metal in the irrigation valve is substantially reduced, machining of parts in the manufacture of the valve is avoided, and the valve can be produced easier and with greater economy than otherwise.

Another important object of the invention is to provide an irrigation valve whose parts are designed for ready and convenient assembly; a number of the parts remaining separate and being assembled at the point of use.

An additional object of the invention is to provide a novel mounting arrangement for the cross bar, and through which cross bar the vertical lid adjusting screw is threaded; such mounting arrangement being designed to prevent breakage of the concrete, seat forming ring upon elongation of said cross bar resulting from tension of the adjusting screw.

It is also an object of the invention to provide an irrigation valve which has the further advantages of ease of adjustment; leakproof when closed; and a design to prevent puddling—which health regulations forbid—on top from rainwater or irrigation water splashing thereon.

Still another object of the invention is to provide a practical and reliable irrigation valve, and yet one which will be exceedingly effective for the purpose for which it is designed.

These objects are accomplished by means of such structure and relative arrangement of parts as will fully appear by a perusal of the following specification and claims.

In the drawings:

Fig. 1 is a sectional elevation of the improved irrigation valve in closed position.

Fig. 2 is a plan view of the same partly broken away.

Fig. 3 is a fragmentary inside elevation of the seat forming ring, showing one of the notches adapted for reception of the corresponding supporting pad of the cross bar.

Referring now more particularly to the characters of reference on the drawings, the valve comprises a concrete, seat forming ring 1 adapted to engage in matching relation on the upper end of a concrete stand pipe 2; such ring including

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a depending annular locating and retention skirt 3 which surrounds the upper end portion of the stand pipe 2. There is a layer of mortar 4 between the bottom of the ring 1 and the upper end of the stand pipe 2, while another layer of mortar 5 exists between the annular skirt 3 and the adjacent side portion of said stand pipe 2.

A cross bar 6 spans diametrally between opposite sides of the stand pipe 2 at its upper end, and such cross bar is formed, at the ends, with horizontal, supporting pads 7 which engage in receiving notches 8 in the ring 1; such notches being open to the bottom and to the inside of such ring. The pads 7 are of lesser radial extent than the depth of the receiving notches 8, and compression blocks 9—preferably of rubber or neoprene—are engaged in close fitting relation between the free ends of the pads 7 and the back ends of said notches.

The purpose of the compression blocks 9 will hereinafter appear.

The cross bar 6 is formed with a central hub 10 having a vertical bore threaded for the reception of a screw 11 formed on the lower portion of a vertical shaft 12 which projects above such cross bar. The cross bar 6 and the shaft 12, including the threadingly engaged portions thereof, are cast metal, whereby to avoid machining.

Above the screw 11 the shaft 12 projects in turnable relation through a vertical, central bore 13 in a circular lid 14 formed of concrete. Such circular lid 14 is supported from below by a washer 15 on shaft 12, which washer seats on a cross pin 16 extending through such shaft. The projecting end portions of the cross pin 16 are bent slightly to prevent such pin from escaping.

Another washer 17 surrounds the shaft 12 between the top of the lid 14 and an enlarged annular stop shoulder 18 integral with the shaft. Above the stop shoulder 18 the shaft is formed with a square head 19 through which a double-ended transverse handle 20 projects for manipulation of the valve.

With the above described arrangement the shaft 12 is readily actuated to adjust the circular lid up or down. When the lid 14 is in closed position an annular, resilient gasket 21 seals such lid with the ring 1, whereby to prevent water flow; the resilient gasket 21 being circular in cross section, and is secured—by cementing—in a semi-circular channel 22 formed in the under side of said lid 14.

The top 23 of the circular lid 14 slopes downwardly and outwardly from the center, whereby any water which falls on said lid from rain or

from splashing cannot form a puddle wherein mosquitos could otherwise breed.

Under certain positions of adjustment, as when the lid 14 is fully closed and the screw 11 is under considerable tension, some elongation of the cross bar 6 occurs. To prevent such elongation from fracturing the concrete ring 1 or the annular depending skirt 3, the compression blocks 9 are employed. Any elongation or extension of the cross bar 6 is absorbed by the compression blocks 9, without damage to the ring 1 or skirt 3.

The described irrigation valve is not only designed for ease and economy of manufacture and installation, but when in use provides a very practical and sturdy structure.

From the foregoing description it will be readily seen that there has been produced such a device as substantially fulfills the objects of the invention, as set forth herein.

While this specification sets forth in detail the present and preferred construction of the device, still in practice such deviations from such detail may be resorted to as do not form a departure from the spirit of the invention, as defined by the appended claims.

Having thus described the invention, the following is claimed as new and useful, and upon which Letters Patent are desired:

1. An irrigation valve for mounting on a stand pipe comprising a cross bar adapted to rest on top of the stand pipe, a screw threaded through the cross bar, a valve lid mounted on the screw above the cross bar, and a member adapted to be mounted on the stand pipe to hold the cross bar against upward movement and rotation, and also forming a seat for the lid; said member comprising a top ring to rest on top of the stand pipe and having notches open to the bottom and into which the outer ends of the arms project, and a skirt formed with the ring and depending about the stand pipe in substantially fitting relation.

2. An irrigation valve for mounting on a stand pipe comprising a cross bar adapted to rest on top of the stand pipe, a screw threaded through the cross bar, a valve lid mounted on the screw above the cross bar, and a member adapted to be mounted on the stand pipe to hold the cross bar against upward movement and rotation, and also forming a seat for the lid, said member including a top ring adapted to rest on and be secured to the top of the stand pipe and having notches open to the bottom and into which the outer ends of the arms project, the arms terminating short of the bottom of the notches, and resilient compression blocks in the notches filling the spaces between the ends of the arms and the bottom of the notches.

GILBERT D. WILLIAMSON.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
656,581	Kiler	Aug. 21, 1900
763,187	Keller	June 21, 1904
989,920	Messer	Apr. 18, 1911
1,036,674	Meurling	Aug. 27, 1912
1,220,296	Vanderford	May 27, 1917
1,287,189	Benner	Dec. 10, 1918
1,399,434	Kurtz	Dec. 6, 1921
1,674,074	Turner	June 9, 1928
1,875,857	Cruff	Sept. 6, 1932