

J. H. BOGGESS.

TANK VALVE.

APPLICATION FILED AUG. 29, 1905.

905,787.

Patented Dec. 1, 1908.

Fig. 1

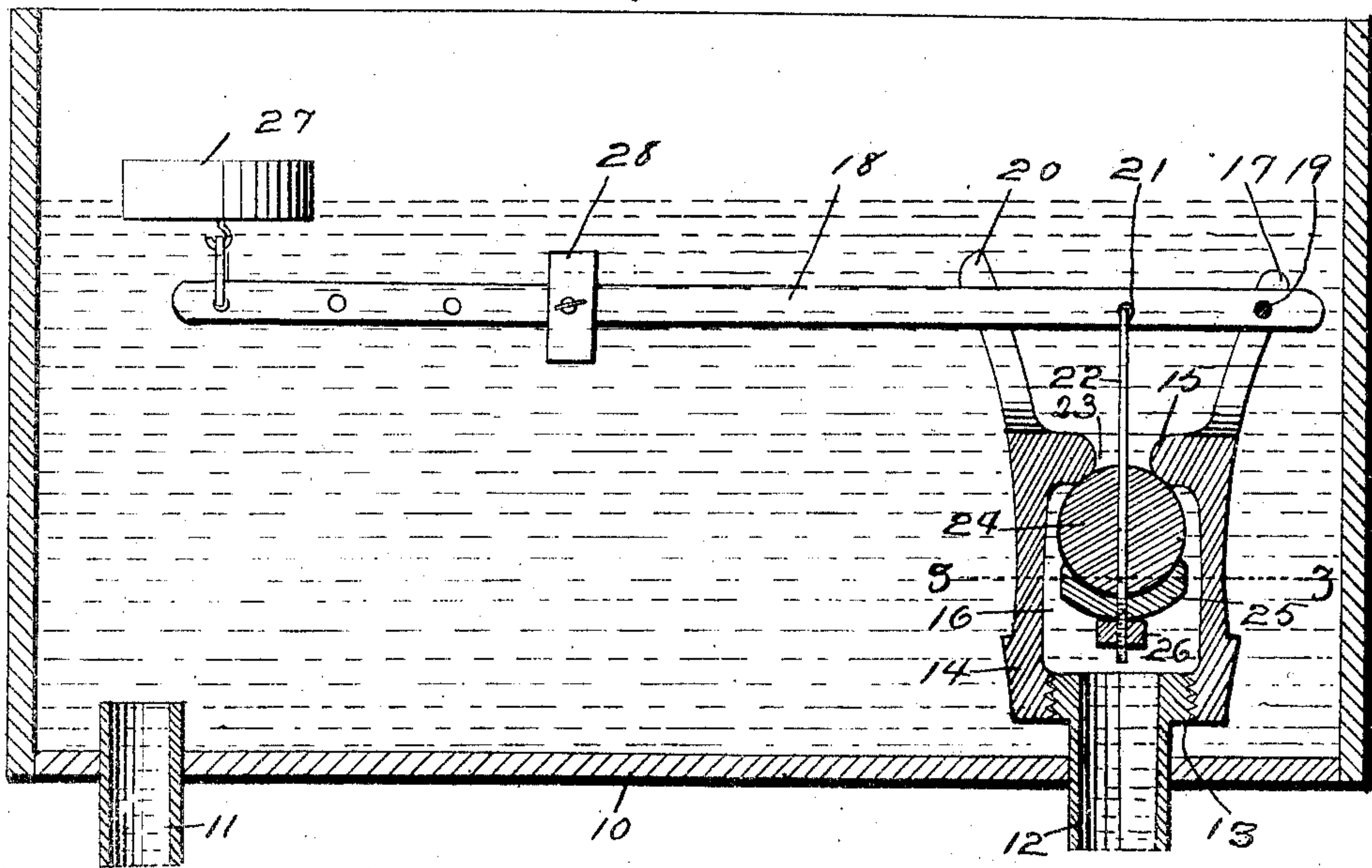


Fig. 2

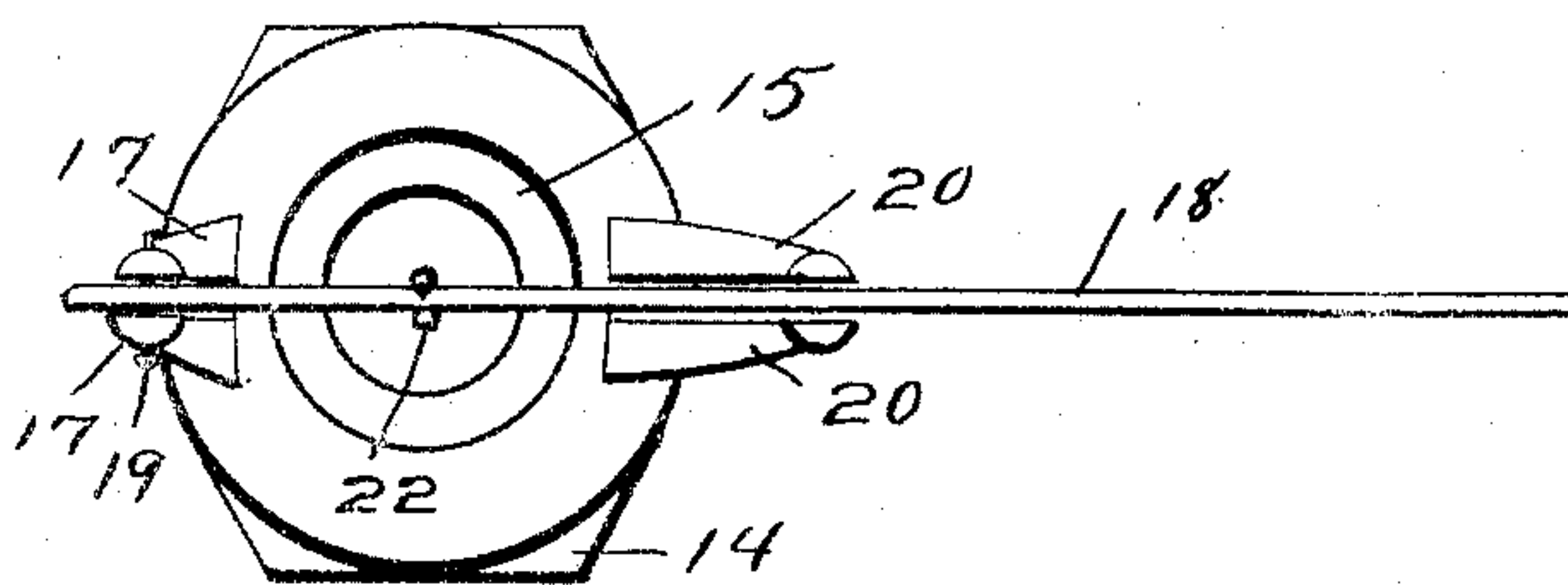
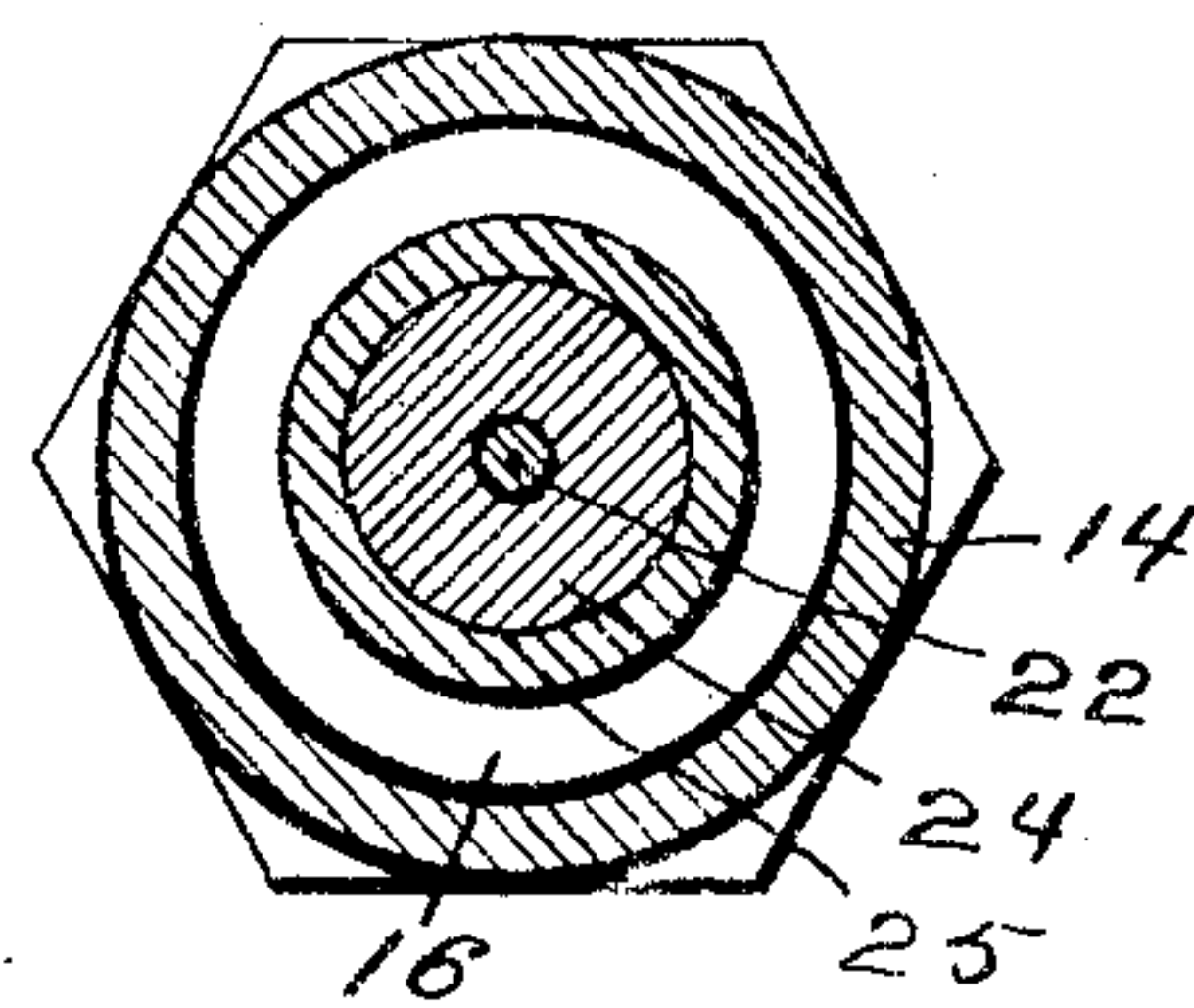


Fig. 3



Witnesses:

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UNITED STATES PATENT OFFICE.

AMES H. BOGGESS, OF HENDERSON, IOWA.

TANK-VALVE.

No. 905,787.

Specification of Letters Patent.

Patented Dec. 1, 1908.

Application filed August 29, 1905. Serial No. 276,760.

To all whom it may concern:

Be it known that I, JAMES H. BOGGESS, a citizen of the United States, residing at Henderson, in the county of Mills and State of Iowa, have invented a certain new and useful Tank-Valve, of which the following is a specification.

The objects of my invention are to provide a float valve of simple, durable and inexpensive construction in which the valve is so mounted that it can be adjusted to various positions so that the height of the water in the tank can be accurately predetermined.

A further object is to provide means for forcing the valve out of engagement with the valve seat and for maintaining the valve out of engagement against any force of water passing through the valve chamber so that the amount of downward pressure of the valve against the force of the water can be regulated by the adjustment of the weight on the lever for operating the valve.

My invention consists in certain details in the construction, arrangement and combination of the various parts of the device, whereby the objects contemplated are attained, as hereinafter more fully set forth, pointed out in my claim and illustrated in the accompanying drawings, in which—

Figure 1 is a sectional view of my valve mounted in an ordinary tank. This view also shows the tank in section. Fig. 2 is a top view of the valve showing the lever for operating the valve broken away, and Fig. 3 is a sectional view cut on the line 3—3 of Fig. 1 looking downwardly.

Referring to the accompanying drawings, I have used the reference numeral 10 to indicate the tank in which the valve is mounted having the outlet pipe 11 and the inlet pipe 12 extending through the bottom portion thereof. The upper end of the pipe 12 has a screw threaded flange designed to screw into the lower portion of the valve casing which also has a screw threaded opening 13 extending into its lower portion into which the screw threaded portion of the inlet pipe 12 is screwed. The valve casing, I have designated by the numeral 14 and this casing has a circular rounded flange 15 at the top portion of it which forms the valve seat and the upper portion of the valve chamber 16. Extending upwardly from one side of the valve casing are the arms 17 between which the valve lever 18

is pivotally mounted by the pin 19. Extending upwardly from the valve casing at a point diametrically opposite to the arms 17 are two guiding arms 20 between which the lever 18 operates. These arms are designed to prevent the lever from any lateral movement as it is swung upwardly and downwardly on its pivot. There is an opening in the lever 18 midway between the arms 17 and the arms 20 which I have designated by the numeral 21 into which the upper hooked portion of the valve stem 22 is passed.

The valve stem extends downwardly from the opening 21 through the opening 23 formed by the valve seat to a point a slight distance above the screw threaded portion of the valve casing. Mounted on this stem 22 and at a point where it can be easily thrown into or out of engagement with the valve seat by the operation of the lever 18 is the substantially round valve 24. This valve is also capable of being moved upwardly and downwardly on the stem 22. Slidingly mounted on the valve stem 22 and beneath the valve 24 is the valve socket 25 in which the valve rests. The lower end of the valve stem is screw threaded and a nut 26 is screwed into the screw threaded portion to support the valve 24 and the valve socket 25 in the desired position by simply screwing or unscrewing the nut. The valve and valve socket can be raised or lowered so that the distance the lever 18 will have to be raised to close the valve will be increased or diminished by unscrewing or screwing the nut upon the stem. At the extreme free end of the lever 18, I have pivotally screwed a float 27 which is designed to be floated upwardly by the water coming into the tank and to raise the lever as the water raises it and close the valve and shut off the water supply. Slidingly mounted on the lever on that portion of it which is between the point of attachment of the float and the arms 20 is the weight 28 which is adjustably secured to this lever so that the lever will be forced downwardly to a greater or less degree as it is moved toward or away from the free end of the lever 28. This enables the operator to adjust the weight so that the valve will be more or less readily opened as the water flows out of the tank.

Having thus described my invention, what I claim and desire to secure by Letters Patent of the United States, therefor is—

The combination of a tank having a water

outlet therein, a pipe extending up through the bottom of the tank and adapted to be connected with a source of water supply, a valve casing having its lower end threaded 5 on said pipe and at its upper end terminating in an inwardly directed circular flange the under face of which forms a valve seat, arms extending upwardly and outwardly from the upper face of said circular flange, 10 said arms being arranged in pairs and located on diametrically opposite portions of said flange and being formed integral with said flange, a lever pivotally connected between one pair of said arms and arranged to swing 15 vertically between the other pair of arms,

whereby it is held against lateral play, a float on the lever, a weight slidably mounted on said lever, a stem depending from the lever into the casing, a ball valve detachably secured on the stem and located in the casing 20 below the flange thereof, and a valve socket also detachably secured on the stem and arranged beneath the ball valve for the same to rest in.

Des Moines, Iowa, August 13, 1904.

JAMES H. BOGGESS.

Witnesses:

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