

T. SMITH.
WATER SUPPLY APPARATUS.
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923,905.

Patented June 8, 1909.

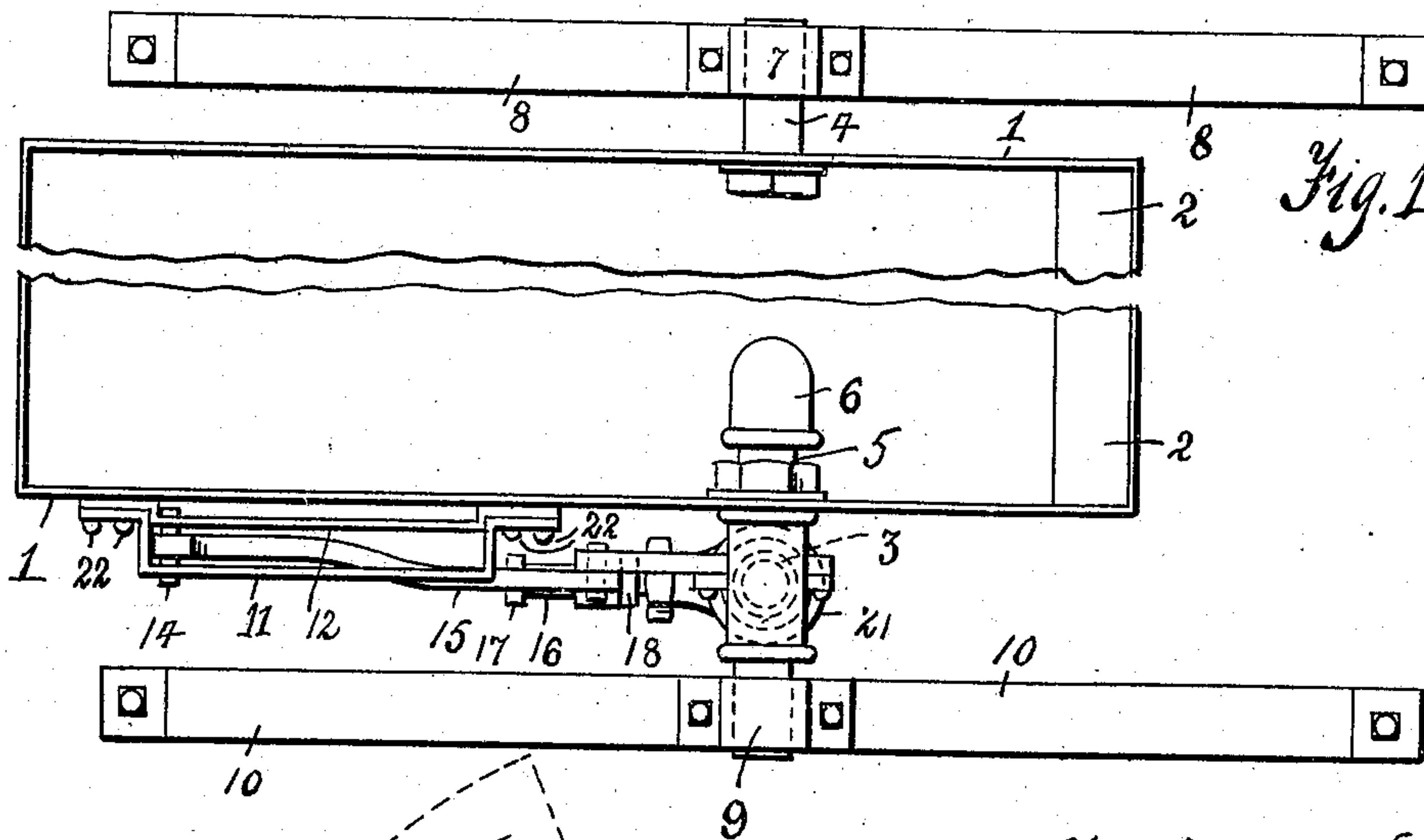


Fig. 1

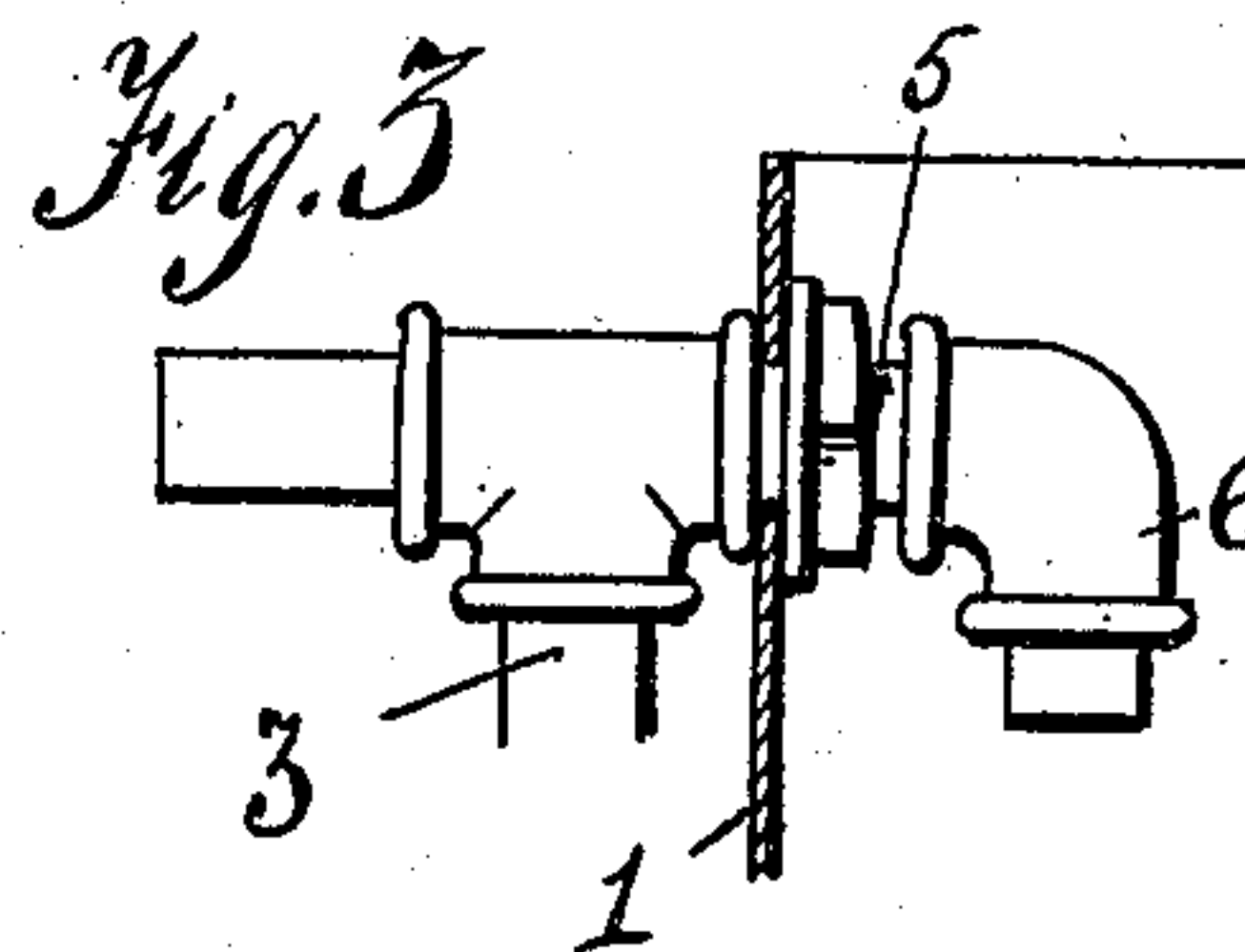


Fig. 3

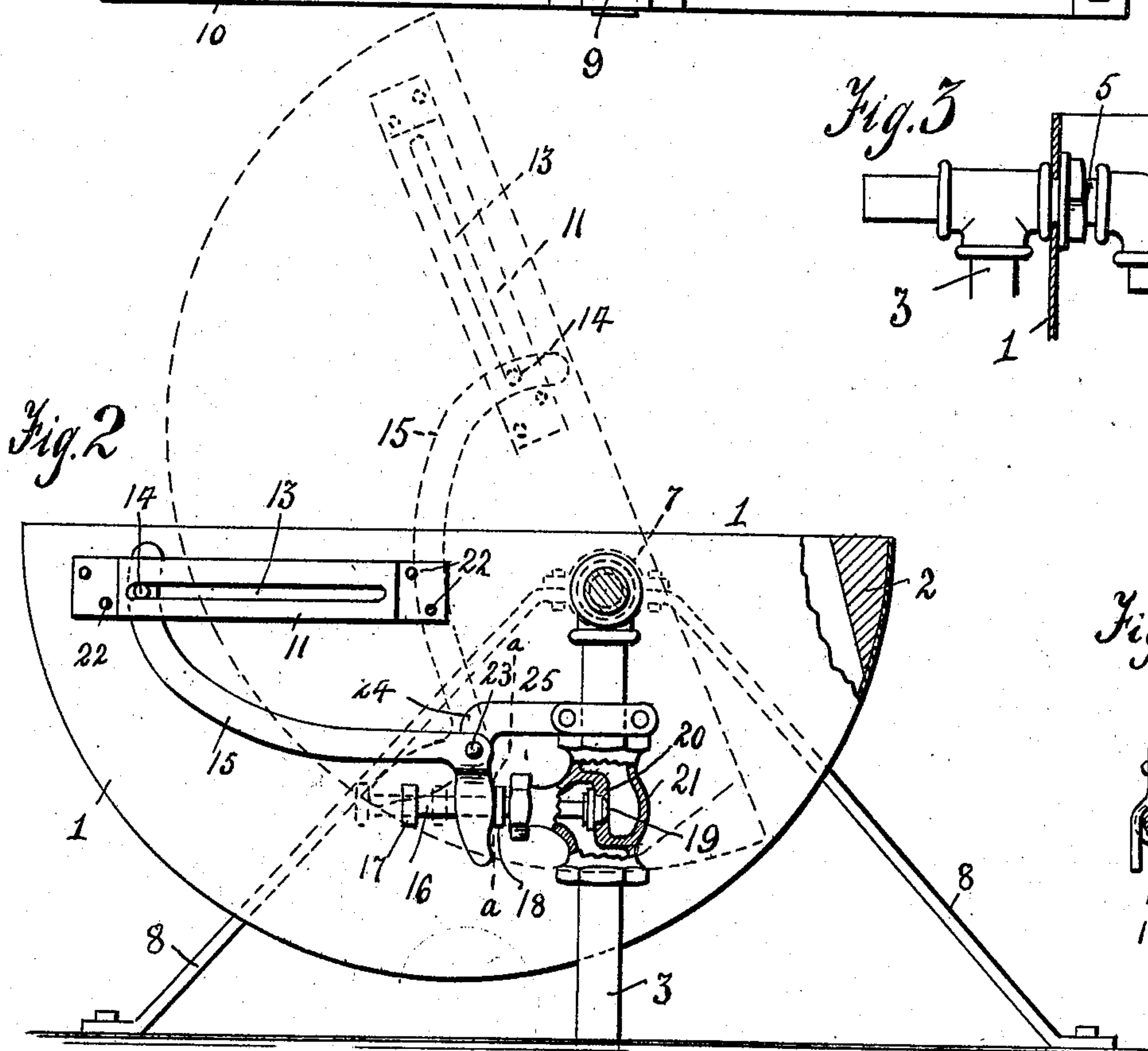
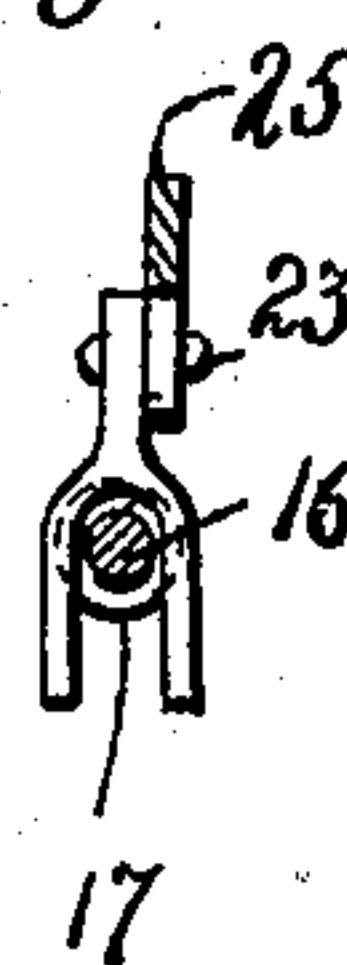


Fig. 2

Fig. 4



Witnesses.
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UNITED STATES PATENT OFFICE.

THOMAS SMITH, OF SALT LAKE CITY, UTAH.

WATER-SUPPLY APPARATUS.

No. 923,905.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, THOMAS SMITH, a citizen of the United States, residing at Salt Lake City, in the county of Salt Lake and State of Utah, have invented certain new and useful Improvements in Water-Supply Apparatus, of which the following is a specification.

This invention relates to water supply apparatus.

One object of the invention is to provide a water supply apparatus especially adapted for the watering of stock, poultry, etc., embodying such characteristics that the water supply may be controlled automatically and waste of the water prevented, thereby obviating a sloppy condition about the apparatus and also providing against the waste of the water especially where the supply is limited.

Another object of the invention resides in the provision of a water supply apparatus of the character stated, wherein the water tank will be prevented from upsetting by virtue of an automatic supply of water let into the tank in the event of its starting to tilt, such controlling means being adapted to effect a return of the water tank to its normal position in the event that it is manually tilted for the purpose of flushing or cleaning the tank.

With the above and other objects in view, the present invention consists in the combination and arrangement of parts hereinafter more fully described, illustrated in the accompanying drawings, and particularly pointed out in the appended claims, it being understood that changes may be made in the form, proportion, size and minor details without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawings:—Figure 1 is a plan view of the invention, the water tank being broken away intermediate its sides to indicate that the tank may be of a size appreciably larger than that indicated in the drawings. Fig. 2 is a side elevation, partly in section, showing the invention in normal position in full lines and in upset condition in dotted lines. Fig. 3 is a detail perspective view through one side of the tank showing the water supply pipe leading into the tank and also providing for a pivotal mounting of the tank at one side thereof.

Referring now more particularly to the accompanying drawings, the reference char-

acter 1 indicates the water receiving tank weighted at one end, as indicated at 2, and preferably of a semi-spherical formation in cross section, as shown in Fig. 2.

The water receiving tank 1 may be pivotally supported in any suitable manner, but one form of means employed resides in pivotally mounting the tank at its sides to one side of the center thereof by means of the water supply pipe 3 and a trunnion 4, the water supply pipe 3 having an extension 5 extending into the tank and directed downwardly, as at 6, the extension 5 cooperating with the trunnion 4 to provide for the pivotal axes of the tank. The axis 4 is journaled in a suitable bearing 7 carried at the upper ends of the downwardly converging legs 8 at one side of the tank, while the extension 5 and consequently the water supply pipe 3 is supported in a suitable bearing 9 carried at the upper end of the downwardly diverging legs 10 at the opposite side of the tank, these legs 8 and 10 serving to support the tank above the ground, floor or other place of location of the apparatus.

Upon the side of the tank 1 adjacent the water supply pipe 3 there is provided spaced guide bars 11 and 12, each guide bar 11 and 12 having a longitudinal slot 13 adapted to slidably receive the pin 14 carried at the upper outer end of the curved valve operating lever 15, which has its inner end bifurcated to embrace the valve stem 16 between the spaced heads 17 and 18 of the latter, said valve stem being connected to the valve 19 which moves into and out of engagement with the valve seat 20 of the valve casing 21 to open and close the valve according to the movement of the valve operating arm incident to the movement of the tank 1 in a manner hereinafter explained. It will be seen that the guide members 11 and 12 overlap at their free ends and that they are both fastened together at their ends and to the corresponding side of the tank through the instrumentality of suitable fastenings 22, and to provide for the necessary pivotal movement of the valve operating lever 15, I pivot the latter at 23 to the outer downwardly directed part 24 of an arm 25 which is clamped or otherwise secured in any suitable manner to the water supply pipe 3 immediately above the valve 21, as shown.

From the foregoing, it will be understood that my improved water receiving tank is pivoted to one side of its center and that it

is weighted at one end, the weight being adapted to counterbalance the weight of the water in the tank, and it will be understood that the tank is prevented from being over-
 5 come by its weight 2 by virtue of the automatic supply of the water to the tank in the event that the tank starts to dip or tilt. When the tank is full or has reached that degree of quantity desired, as to hold it in
 10 its normal position, the valve mechanism is closed and the water consequently cut off by reason of the bifurcated inner end of the valve controlling lever 15 engaging the collar or stop 18 of the valve stem 16 and the
 15 pin 14 at the outer end of the guide bars 11 and 12 being at the outer end of the slots 13. Just as soon as the water begins to lower in the tank 1, the latter begins to dip or tilt accordingly. Such dipping or tilting causes
 20 the pin 14 of the valve controlling lever 15 to ride inwardly in the slots 13, resulting in the bifurcated end of the valve operating lever 15 engaging the collar 17 of the valve stem 16 and slightly opening the valve 21
 25 to replenish the tank accordingly, and when the tank is replenished to the required extent, the pin 14 of the valve controlling lever 15 rides outwardly in the slot 13 to draw the bifurcated end of the lever 15 into en-
 30 gagement with the collar or stop 18 and thereby close the valve to automatically shut off the water.

When it is desired to flush or clean the tank, the same may be dipped or tilted
 35 manually, as indicated in dotted lines in Fig. 2, and after the flushing and cleaning of the tank, the operator may leave the tank and be assured that it will assume its normal position and receive the predetermined supply
 40 of water without any attention on his part.

The invention is exceedingly simple in construction, inexpensive of manufacture, and may be relied upon to positively perform the functions herein outlined.

45 If desired my invention might be mounted in a manger or box by boring holes in the same for the axes 4 and 5, thereby eliminating the supporting legs 8 and 10. However, this particular mounting of the tank is obvi-
 50 ous and therefore unnecessary to illustrate.

Having thus described the invention, what is claimed as new is:—

1. In a water supply apparatus, a tank, means for pivotally mounting the tank to
 55 one side of its center, a valved water supply pipe leading into the tank, the tank being weighted at one end, guides upon one side of the water tank, the guides having alining slots, and a lever having a pin at one end to
 60 ride in said slots of said guides and having its opposite end engaging the stem of the valve of the water supply pipe to automatically control the supply of water to the tank.

2. In a water supply apparatus, a tank,
 65 means for pivotally mounting the tank to

one side of its center, a valved water supply pipe leading into the tank, the tank being weighted at one end, guides upon one side of the water tank, the guides having alining
 70 slots, and means having engagement with the valve stem of the valve of the water supply pipe and having operative engagement with the guides of the tank to automatically control the supply of water to the
 75 tank.

3. In a water supply apparatus, a valved water supply pipe having an extension, a tank journaled at one side upon the extension of the water supply pipe, means for
 80 pivotally mounting the opposite side of the tank, the tank being weighted at one end, the valve of the water supply pipe having a stem projecting from the valve casing and provided with spaced stops, an arm secured
 85 to the water supply pipe above said valve, a guide upon the side of the tank adjacent said water supply pipe, and a valve controlling lever mounted to slide at its outer end in
 90 said guide and having its inner end pivotally secured to said arm and bifurcated to embrace said stem between the stops of the latter to automatically operate said valve and hold the tank automatically in its nor-
 95 mal position.

4. In a water supply apparatus, a tank
 95 weighted at one end, means for pivotally mounting the tank to one side of its center, said pivotal means including a valved feed water pipe, guiding means upon one side of the tank, and a valve controlling lever oper-
 100 able in said guiding means and having connection with the valve to automatically control the latter.

5. In a water supply apparatus, spaced
 105 pairs of supporting legs, the legs of each pair diverging downwardly, a tank, a valved water supply pipe, means mounted in said legs to pivotally mount the tank, said supply pipe being included in said pivotal
 110 means, and means automatically controlling the valve of said supply pipe to maintain the tank normally in substantially horizontal position.

6. In a water supply apparatus, spaced
 115 pairs of supporting legs, a tank, a valved water supply pipe, means mounted in said legs to pivotally mount the tank, said supply pipe being included in said pivotal means, and means automatically controlling
 120 the valve of said supply pipe to maintain the tank normally in substantially horizontal position.

7. In a water supply apparatus, a tank, means for pivotally mounting the tank, a
 125 valved water supply pipe leading into the tank, guides upon one side of the water tank, the guides having alining slots, and a lever having a pin at one end to ride in said slots of said guides and having its opposite end
 130 engaging the valve of the water supply pipe

to automatically control the supply of water to the tank.

8. In a water supply apparatus, a valved water supply pipe having an extension, a
5 tank journaled at one side upon the extension of the water supply pipe, means for pivotally mounting the opposite side of the tank, the valve of the water supply pipe having a stem projecting from the valve casing
10 and provided with spaced stops, an arm secured to the water supply pipe above said valve, a guide upon the side of the tank adjacent said water supply pipe, and a valve controlling lever mounted to slide at its
15 outer end in said guide and having its inner end pivotally secured to said arm and bifurcated to embrace said stem between the

stops of the latter to automatically operate said valve and hold the tank automatically in its normal position.

9. In a water supply apparatus, a tank, means for pivotally mounting the tank, a valved water supply pipe leading into the tank, means having engagement with the valve of the valved water supply pipe and
20 having slidable engagement with one side of the tank exterior of the latter to automatically control the supply of water to the tank.

In testimony whereof I affix my signature, in presence of two witnesses.

THOMAS SMITH.

Witnesses:

GEORGE J. SILVER,
CLARENCE M. CANNON.