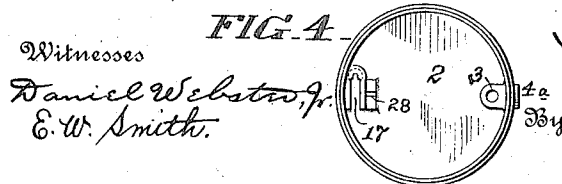
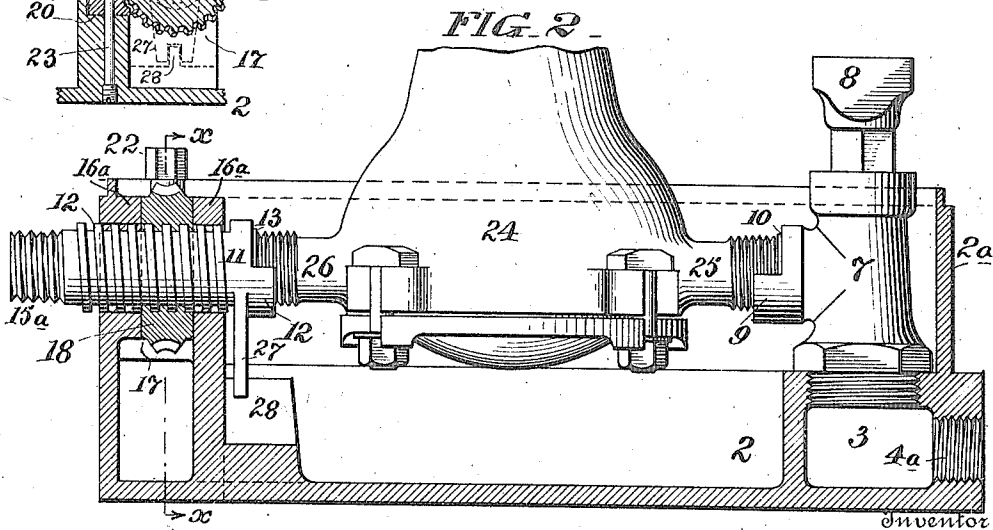
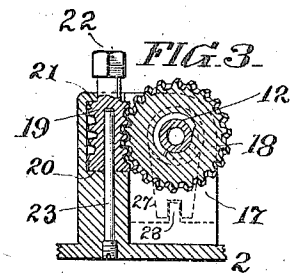
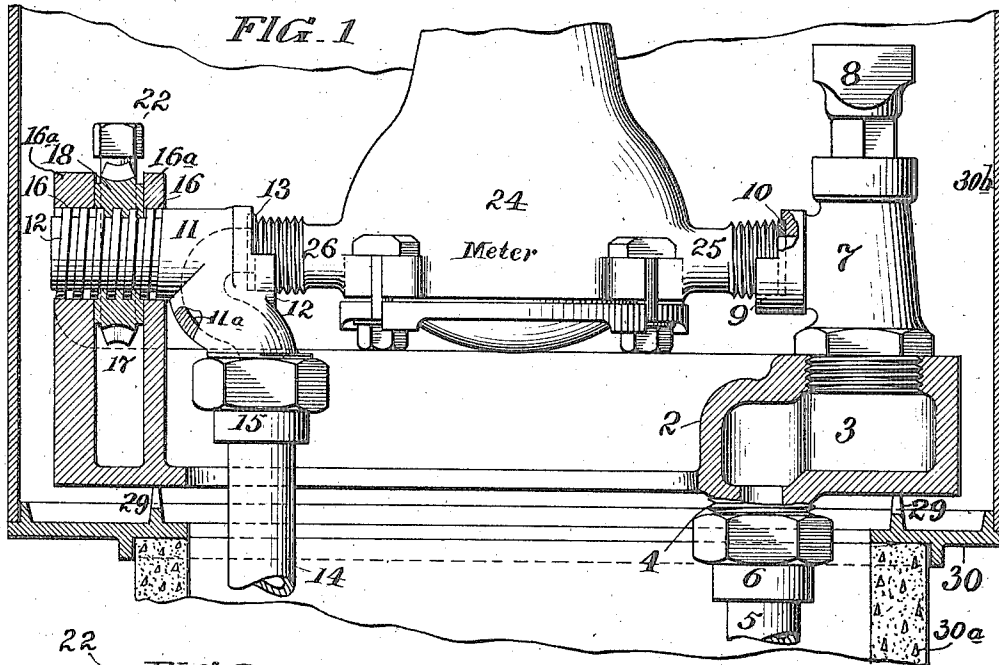


H. M. LOFTON.
METER BOX.
APPLICATION FILED OCT. 31, 1916.

1,249,435.

Patented Dec. 11, 1917.



Witnesses

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HERBERT M. LOFTON, OF CHATTANOOGA, TENNESSEE.

METER-BOX.

1,249,435.

Specification of Letters Patent.

Patented Dec. 11, 1917.

Application filed October 31, 1916. Serial No. 128,693.

To all whom it may concern:

Be it known that I, HERBERT M. LOFTON, a citizen of the United States, and resident of Chattanooga, county of Hamilton, and State of Tennessee, have invented an Improvement in Meter-Boxes; of which the following is a specification.

My invention has for its object certain improvements in meter boxes, and more particularly in the means for supporting the meter in a suspended position whereby it may be easily installed or removed.

My improvements consist in an annular frame having an inlet chamber with which the street main makes communication, said annular frame having a shut-off valve secured thereto and in communication with the inlet chamber and also having a socketed outlet for receiving and supporting the inlet to the meter, the said annular frame being provided with an adjustable house main outlet also having a socket and support adapted to receive and support the outlet of the meter, said adjustable house main outlet provided with means for adjusting it longitudinally to and from the meter.

My invention also comprehends details of construction which, together with the features above stated, will be better understood by reference to the drawings, in which:—

Figure 1 is a sectional elevation of a portion of a meter box and meter support with meter attached, embodying my invention; Fig. 2 is a similar view of a modified form of the same; Fig. 3 is a transverse section illustrating the mode of operating the house main outlet to secure adjustment; and Fig. 4 is a plan view of the annular casing shown in Fig. 2.

Referring first to the construction illustrated in Figs. 1 and 3, the meter box is indicated by way of example as comprising a concrete chamber 30^a upon which rests an annular cast iron base 30, and upward from which extends a cast iron box or chamber 30^b; this forming a part of the construction illustrated in my application Serial Number 840,689, filed May 25, 1914. This annular plate 30 of the meter box is shown as provided with upwardly extending lugs 29 upon which the annular meter support 2 rests so that it is surrounded on all sides by air. The annular meter support 2 is a casting having at one side an inlet chamber 3 provided with a union 6 at the bottom for making connection with the vertical street main pipe 5

which projects upwardly through the tubular part 30^a of the meter box. Screwed into the upper part of the chamber 3 is the shut-off valve 7 having the spindle 8 shaped to receive a key or other suitable means inserted from above for turning the valve piece to shut off the water from the street main when desired, as when removing the meter. This valve 7 is provided with a socket 9 having an annular packing 10 against which the meter inlet 25 presses for making a water-tight joint between it and the valve. The lower part of the socket 9 is made semi-circular and forms a cradle into which the meter inlet 25 is placed and by which it is supported in proper alinement with the outlet of the valve 7. At the side of the annular frame 2, diametrically opposite from the chamber 3 are arranged two upwardly projecting portions 16^a having through them horizontal holes 16 through which the threaded hub 12 of the house main outlet nozzle 11 is horizontally guided in a direction to and from the valve 7. The house main outlet nozzle 11 is provided with a supporting socket 12 and an annular packing 13 corresponding to those of the valve 7 but oppositely directed and adapted to receive and support the outlet 26 of the meter 24. The nozzle 11 is furthermore provided with a sinuous tubular outlet 11^a extending from the nozzle and opening downward in a union 15 which connects with the vertical house main 14 which may extend downward through the meter box. The means for adjusting the nozzle 11 comprises a worm wheel 18 which has a hole threaded to receive the threaded hub 12 of the nozzle. This worm wheel is arranged in the space 17 between the parts 16^a of the annular frame, and thereby positioned while free to revolve upon the hub. This worm wheel is rotated by a worm 19 having a hexagonal or other polygonal-shaped other end upon which an operating key may be placed for rotating it. The worm is placed in a socket portion of the casting and resting at the bottom upon the shoulder 20 and held against rising by the shoulder 21. After the worm wheel is placed in position, a pin 23 is inserted upward from the bottom through the casting and into a hole in the worm thereby providing an axis about which the worm may rotate. By rotating the worm the nozzle 11 will be moved toward or from the valve 7 and thereby enables the socket portions 9

and 12 to clamp upon the inlet and outlet of the meter to hold it firmly in position and make water-tight joints. The upright pipe 14 is free to bend under the adjustment action of the nozzle 11 and at the same time holds the nozzle against rotating with the worm wheel. When the meter is to be removed, the valve 7 is shut off, but when in place and clamped in position between the sockets 9 and 12, the valve 7 is turned on so that the water rises from pipe 5 into the chamber 3, thence through the valve 7, meter 24, nozzle 11, and down by pipe 14 to place of use.

In the construction shown in Fig. 2, we have in a general way the same arrangement of parts but modified so that the annular frame 2 acts as a base and sets upon the ground. In this case, the inlet chamber 3 is provided with a lateral screw-threaded inlet 4^a into which the street main is screwed. The annular frame may also be provided with an upright flange 2^a and shaped to support a suitable meter box above it, the annular frame acting as the base of said meter box. The annular frame in this case is shown as closed at the bottom, whereas in Fig. 1 it is left open to provide entrance for the pipe 14. In Fig. 2, the house main nozzle 11 is made tubular within the screw threaded hub part 12, and its end is screw threaded as at 15^a for connection with the house main. In this case there is no pipe connection 14 to hold the nozzle 11 against rotation during the adjustment for clamping the meter in place, and consequently in lieu thereof I provide a downwardly extending arm 27 which is guided upon a lug 28 of the annular frame, which construction prevents the rotation of the nozzle 11 but permits of its longitudinal adjustment in the act of clamping and unclamping the meter.

I have shown my improvements in the form which I prefer in practice, but the details thereof may be modified or varied without departing from the spirit of the invention.

Having now described my invention, what I claim as new and desire to secure by Letters Patent, is:—

1. In means for removably supporting a meter in a meter box, an annular frame having at one side an enlarged inlet chamber provided with an inlet connection thereto for the street main and at the diametrically opposite side a double flanged portion having a transverse hole therethrough in the same vertical plane but higher level than the inlet chamber, combined with a shut-off valve directly screwed into the top of the inlet chamber of the annular frame and having a laterally extending socket in alinement with the transverse hole and for receiving and supporting the inlet nozzle of the meter and also having an upwardly projecting

spindle part for receiving a key to operate the valve, a house main outlet nozzle having a screw threaded portion extending through and guided by the transverse hole in the flanged portions of the annular frame and having a socket for receiving and supporting the outlet nozzle of the meter said socket being directed toward the socket of the shut-off valve, a worm arranged between the flanges and internally screw threaded and through which the screw threaded portion of the nozzle extends, worm means to rotate the worm wheel for adjusting the nozzle to and from the valve, and a house main in communication with the nozzle.

2. In means for removably supporting a meter in a meter box, an annular frame having at one side an enlarged inlet chamber provided with an inlet connection thereto at the bottom and having a union for detachable connection with a vertical portion of the street main and at the diametrically opposite side a double flanged portion having a transverse hole therethrough in the same vertical plane but higher level than the inlet chamber, combined with a shut-off valve directly screwed into the top of the inlet chamber of the annular frame and having a laterally extending socket in alinement with the transverse hole and for receiving and supporting the inlet nozzle of the meter and also having an upwardly projecting spindle part for receiving a key to operate the valve, a house main outlet nozzle having a screw threaded portion extending through and guided by the transverse hole in the flanged portions of the annular frame and having a socket for receiving and supporting the outlet nozzle of the meter, said socket being directed toward the socket of the shut-off valve and also having a downwardly extending union portion for direct detachable connection with an upright pipe constituting a part of the house main, a worm arranged between the flanges and internally screw threaded and through which the screw threaded portion of the nozzle extends, worm means to rotate the worm wheel for adjusting the nozzle to and from the valve, and a house main in communication with the nozzle.

3. The combination of a meter box casing having an annular flange portion, an annular frame for supporting the meter in the box casing supported upon the annular flange portion and having an inlet chamber extending inwardly, said inlet chamber being provided with a union for coupling to the inlet main, a valve screwed into the top of the inlet chamber and having a lateral outlet socket to receive the meter inlet, an adjustable outlet nozzle movably guided in the annular frame diametrically opposite to the inlet chamber and valve said nozzle having an inlet socket to receive the meter outlet

and also having a downwardly extending union for coupling to the house main and hold it against rotation, and means carried by the annular frame to shift the nozzle toward and from the valve, whereby the meter may be detachably clamped between the sockets.

4. In a meter support, an annular frame having an open center and provided with an inlet chamber at one side and transverse guide holes at the other side and at a higher level than the inlet chamber, said inlet chamber being provided at the top with an outlet and at the bottom with a union inlet.

5. In a meter support, an annular frame having an open center and provided with an inlet chamber at one side and transverse guide holes at the other side and at a higher level than the inlet chamber, said inlet chamber being provided at the top with an outlet

and at the bottom with a union inlet, combined with a valve secured in the outlet of the inlet chamber having a lateral socket for the meter inlet, an adjustable nozzle guided in the transverse holes of the annular frame and having a lateral socket for the meter outlet and also a downwardly extending union for detachable connection with a vertical house main, the said house main holding the nozzle against rotating while permitting adjustment toward and from the valve, and means carried by the annular frame and nozzle for adjusting the latter.

In testimony of which invention, I hereunto set my hand.

HERBERT M. LOFTON.

Witnesses:

C. O. REED,

K. L. MCCARTHY.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."