

April 21, 1931.

J. T. SUTLIFF

1,801,376

METER HANGER

Filed Dec. 3, 1927

2 Sheets-Sheet 1

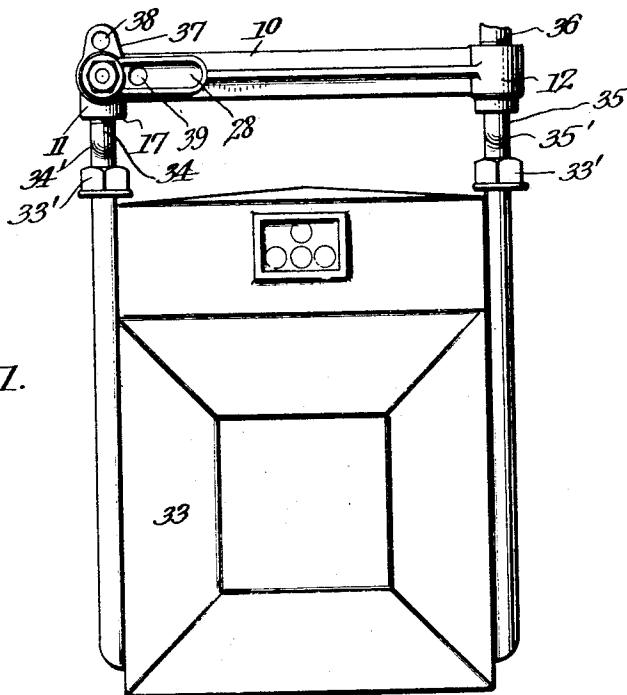


Fig. 1.

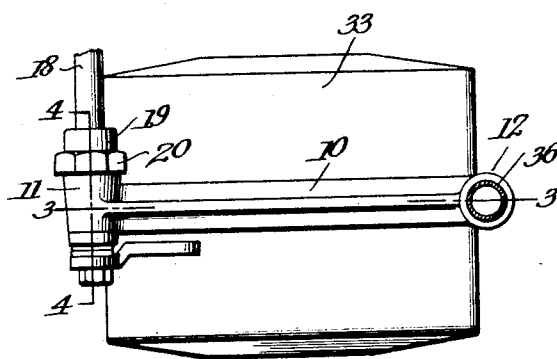


Fig. 2.

Inventor

James T. Sutliff.

By *Lawrence Dugan W. Arby*
Attorney

April 21, 1931.

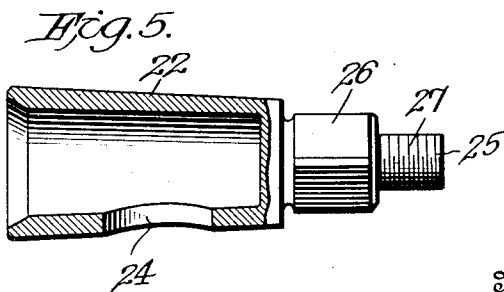
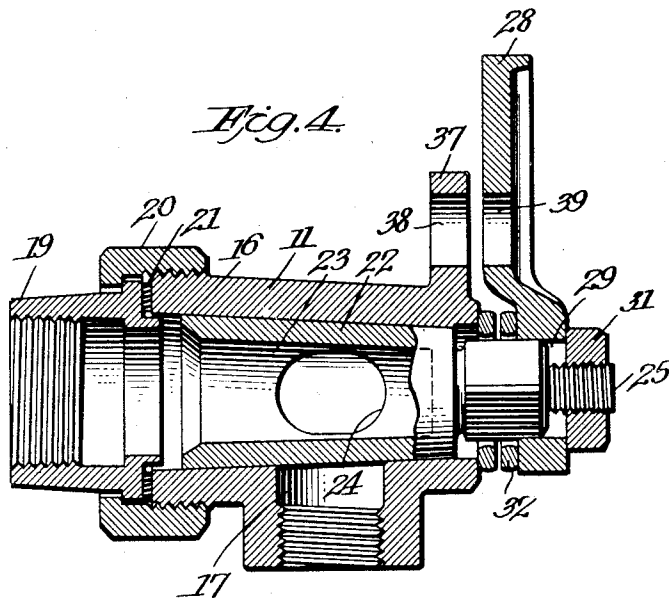
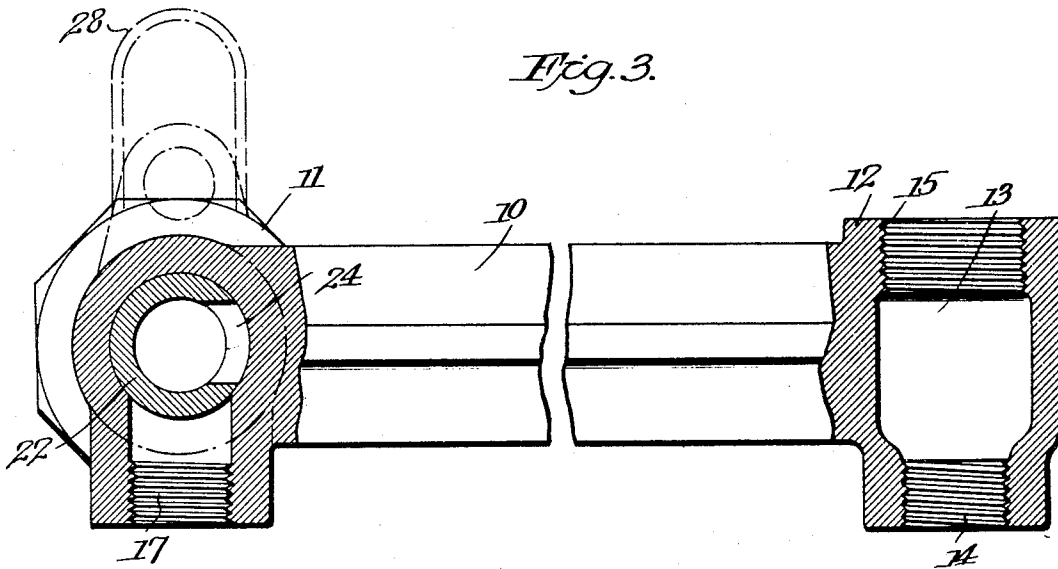
J. T. SUTLIFF

1,801,376

METER HANGER

Filed Dec. 3, 1927

2 Sheets-Sheet 2



Inventor

James T. Sutliff,

By *Cushman, Bryant & Darby*
Attorneys

UNITED STATES PATENT OFFICE

JAMES T. SUTLIFF, OF DECATUR, ILLINOIS, ASSIGNOR TO MUELLER CO., OF DECATUR, ILLINOIS, A CORPORATION OF ILLINOIS

METER HANGER

Application filed December 3, 1927. Serial No. 237,540.

The present invention relates to hangers and more particularly to improvements in meter hangers and their associated parts.

An essential feature of the invention is to provide a hanger having a valve casing incorporated therein for controlling the inlet supply to a meter or the like and which may also have an outlet passage for conducting the supply from the meter to any suitable point of use.

A further feature is to provide a ground key valve casing with means associated with the valve actuating member so as to perform the dual function of maintaining the valve in proper close contact with the casing and also to act as a yieldable washer for the actuating member.

Another object of the invention consists in providing a simple, efficient and economical meter hanger construction in which the various parts may be readily assembled or dismantled for the purpose of inspection or renewal.

Referring to the drawings in which is disclosed a preferred embodiment of the invention:

Figure 1 is a front elevation of a meter showing the hanger and its associated parts connected thereto.

Figure 2 is a plan view of Figure 1.

Figure 3 is a sectional view taken substantially along the line 3—3 of Figure 2.

Figure 4 is a sectional view taken substantially along the line 4—4 of Figure 2 but with the operating handle moved to the closed position.

Figure 5 is a sectional detailed view of the ground key valve.

Referring to the drawing in which like numerals indicate like parts in the various views, 10 denotes a hanger which preferably has adjacent one end an integral valve casing 11 and which may be provided at its opposite extremity with an enlarged tubular boss 12 (Fig. 3) having a vertical passage 13

the ends of which are interiorly threaded as at 14 and 15 for connection with suitable outlet supply pipes.

The valve casing 11 is preferably formed with an axial through bore 16 and a transverse or lateral outlet nipple 17 in one side thereof. An inlet supply pipe 18 (Fig. 2) communicates with the bore 16 and is connected to the casing 11 by a threaded tailpiece 19 and the coupling nut 20 which is secured to the exterior of the casing in the manner as shown in Figure 4. Preferably, a washer 21 is interposed between the adjacent ends of the casing and the tailpiece 19 so as to provide a tight joint when the parts are set up.

For controlling the supply from the inlet pipe 18 to the outlet nipple 17 there is preferably provided a key valve 22 revolvably mounted in the bore 16 of the casing. The valve 22 is formed with a hollow recess 23 which directly communicates at one end with the inlet pipe 18 and has an opening 24 in the side wall thereof arranged to register with the outlet nipple 17.

The valve 22 is preferably tapered and has a stem 25 provided with a reduced squared portion 26 and a further reduced threaded portion 27 which project from one end of the valve casing 11. An operating handle 28 is provided at one end with a complementary squared opening 29 arranged to engage the portion 26 for causing the actuating of the valve 22. Obviously, the portion 26 may be of any suitable polygonal shape so as to interlock with the handle 28. The threaded portion 26 of the valve stem extends outwardly beyond the handle 28 and has connected thereto a nut 31 for detachably maintaining the parts in proper fixed position.

In order to maintain the valve 22 in close contact with the interior of the casing 11 and also to provide a yieldable tensioning means for insuring the proper operation of the handle 28, a coil spring 32 preferably sur-

rounds the squared portion 26 of the valve stem and is confined between the outer ends of the casing and the opposed surface of the operating handle 28 as clearly shown in Figure 4.

The outlet nipple 17 of the casing is connected to a meter or the like 33 by a pipe 34. After the supply has passed through the meter 33 it is conducted to the outlet pipe 35 which is threaded to the lower end of the boss 12 and delivered through the passage 13 to a pipe 36 and conducted to any suitable point of use. The pipes or meter couplings 34 and 35 are preferably bent or offset as at 34' and 35' (Fig. 1) so as to register with the coupling connections 33' on the meter 33.

As shown in Figure 1 the handle 28 is in the open position and the opening 24 is in registration with the outlet nipple 17 so that the supply will pass through the casing and be conducted by the pipe 34 to the meter 33 from where it is delivered by the pipe 35 through the passage 13 of the hanger to the outlet supply pipe 36. As shown in Figure 4 the handle 28 has moved the valve 22 to the closed position, that is to say, the opening 24 is out of alignment with the outlet 17 and consequently the supply is turned off.

The valve casing 11 is preferably formed with a lateral lug or ear 37 which has an opening 38 arranged to register with a complementary formed opening 39 in the handle 28, so that when the valve is closed these openings will be in alignment with each other and a lock or seal can be inserted there-through for securing the parts in locked position to prevent unauthorized or malicious tampering with the valve.

It is to be understood that the form of invention herewith shown and described is merely illustrative of a preferred embodiment of the invention and that such changes as fall within the purview of one skilled in the art may be made without departing from the spirit of the invention and the scope of the appended claims.

What I claim is:

1. In combination, a meter hanger for fluid meters having at one end an outlet passage and at the other end an L-shaped inlet passage, said inlet passage comprising an elongated horizontal tapered portion in the same horizontal plane as the hanger and communicating with a fluid supply pipe, and a shorter vertical portion communicating with the meter, and a hollow tapered valve longitudinally disposed in said tapered horizontal portion and controlling the passage of fluid to the meter and directly subjected to fluid pressure whereby the valve is at all times seated tightly in the tapered horizontal passage.

2. In combination, a meter hanger for fluid meters having at one end an outlet passage and at the other end an inlet passage, said inlet having an elongated tapered horizontal

portion in the same horizontal plane as the hanger and communicating with a fluid supply pipe and a shorter vertical portion communicating with the meter, and a tapered hollow valve closed at one end and having an opening extending at right angles to the valve and communicating with the said shorter vertical portion of the inlet in the open position of the valve, said valve being longitudinally disposed entirely in said horizontal portion of the inlet for controlling passage of fluid to the meter, and the closed end of the valve being at all times directly subjected to fluid pressure from the supply pipe to seat the tapered valve tightly in the tapered horizontal passage and prevent leakage.

3. In combination, a meter hanger for fluid meters having at one end an outlet passage and at the other end an inlet passage, said inlet having an elongated tapered horizontal portion in the same horizontal plane as the hanger and communicating with a fluid supply pipe and a shorter vertical portion communicating with the meter, and a tapered hollow valve closed at one end and having an opening extending at right angles to the valve and communicating with the said shorter vertical portion of the inlet in the open position of the valve, said valve being longitudinally disposed entirely in said horizontal portion of the inlet for controlling passage of fluid to the meter, and the closed end of the valve being at all times directly subjected to fluid pressure from the supply pipe to seat the tapered valve tightly in the tapered horizontal passage and prevent leakage, a handle for operating the valve, and a spring bearing upon the wall of the horizontal passage and the said handle, whereby the handle acts as a thrust for the spring which serves to supplement the fluid pressure in causing the valve to be always tightly seated and prevent leakage.

4. In combination, a meter hanger for fluid meters having at one end an outlet passage and at the other end an inlet passage, said inlet having an elongated tapered horizontal portion in the same horizontal plane as the hanger and communicating with a fluid supply pipe and a shorter vertical portion communicating with the meter, and a tapered hollow valve closed at one end and having an opening extending at right angles to the valve and communicating with the said shorter vertical portion of the inlet in the open position of the valve, said valve being longitudinally disposed entirely in said horizontal portion of the inlet for controlling passage of fluid to the meter, and the closed end of the valve being at all times directly subjected to fluid pressure from the supply pipe to seat the tapered valve tightly in the tapered horizontal passage and prevent leakage, a handle for operating the valve, and a spring bearing upon the wall of the horizontal passage and the said handle, whereby the handle acts as

a thrust for the spring which serves to supplement the fluid pressure in causing the valve to always be tightly seated and prevent leakage, said handle having an offset handle portion provided with an opening, and the said horizontal wall of the inlet having a projection provided with an opening, the said openings being in alignment when the valve is closed and adapted to receive a suitable locking means.

In testimony whereof I have hereunto set my hand.

JAMES T. SUTLIFF.