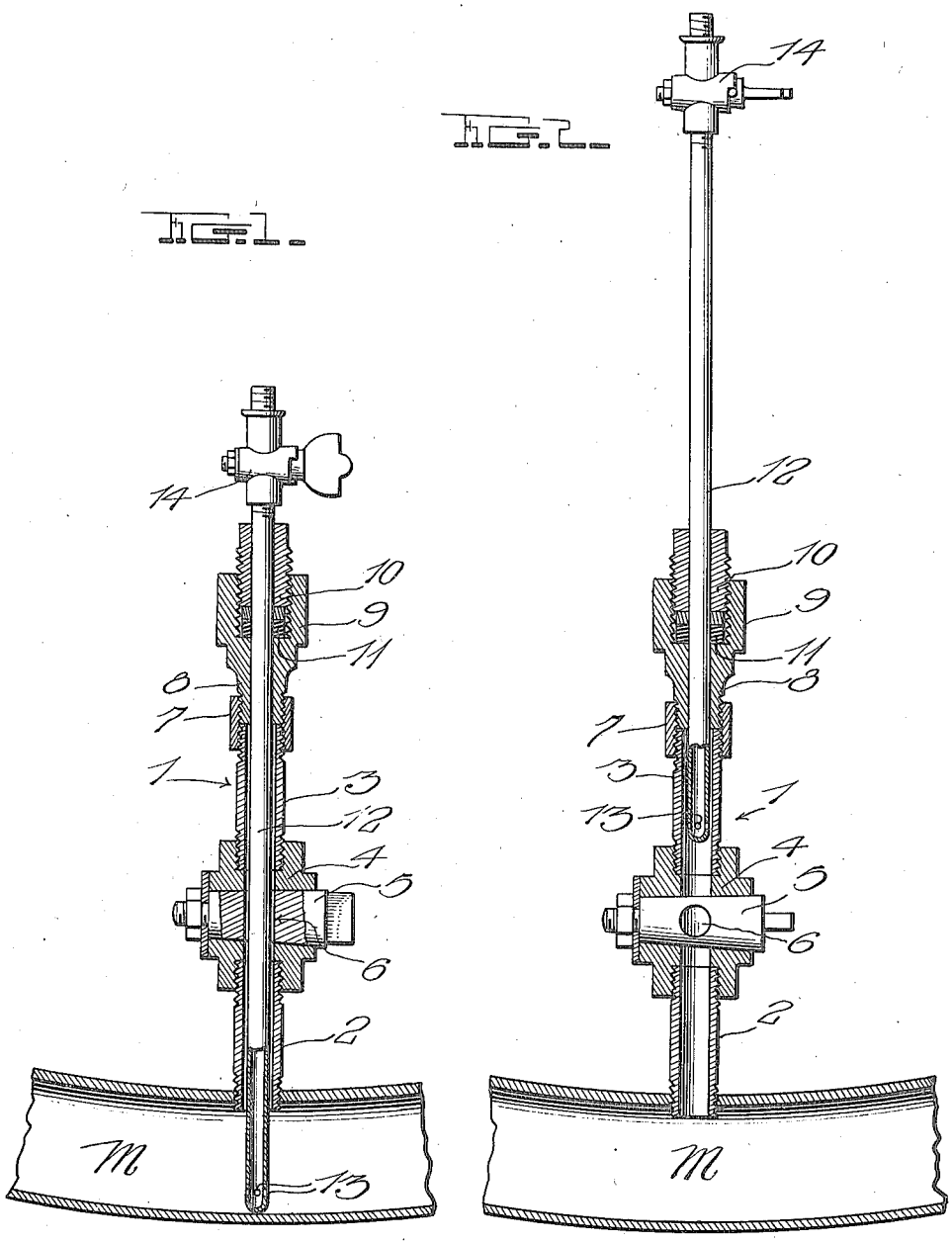
H. J. McGILVRAY.

METHOD OF REMOVING ACCUMULATED LIQUID FROM GAS MAINS AND THE LIKE.

APPLICATION FILED MAR. 6, 1915.

1,181,910. Patented May 2, 1916.



Witnesses

H. Woodard

Inventor

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UNITED STATES PATENT OFFICE.

HARRY JAMES McGILVRAY, OF WESTON, WEST VIRGINIA, ASSIGNOR, BY DIRECT AND MESNE ASSIGNMENTS, OF ONE-HALF TO HUNTER M. BENNETT, OF WESTON, WEST VIRGINIA.

METHOD OF REMOVING ACCUMULATED LIQUID FROM GAS-MAINS AND THE LIKE.

1,181,910. Specification of Letters Patent. Patented May 2, 1916.

Application filed March 6, 1915. Serial No. 12,652.

To all whom it may concern:

Be it known that I, HARRY JAMES McGILVRAY, a citizen of the United States, residing at Weston, in the county of Lewis and State of West Virginia, have invented certain new and useful Improvements in Methods of Removing Accumulated Liquid from Gas-Mains and the like; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to an improved method of removing accumulated liquid from gas mains, pipe lines and the like, without escape of the valuable contents thereof.

Heretofore when tapping gas mains and the like for the purpose of discharging such liquid as has accumulated therein, the facilities have been so inadequate as to cause considerable amounts of the gas or other contents of the mains to be wasted.

It is the object of the present invention therefore, to provide an improved method whereby no waste need occur.

In the accompanying drawings, Figure 1, shows a suitable device for use in carrying out the present invention, in the position assumed while the liquid is being withdrawn from the main and Fig. 2 shows the same parts, at a stage of the operation during the insertion of the slidable tube into the gas main, and during the removal of said tube from said main.

In said drawings M represents a gas main, pipe line or the like, this view showing a low point in said main, for example the bottom of a U-bend therein. Attached to said main is a tubular outlet member 1, which may consist of a lower section 2 tapped into the upper surface of the main M, an upper section 3 alined with said section 2 but spaced therefrom, and a valved connection 4, uniting said two sections. In this connection 4, a valve plug 5 is provided, said plug having a diametrically extending port 6 which, when the plug is rotated to the open position, alines with the interior of the tubular members 2 and 3.

The upper end of the upper section 3 is carried by a coupling 7 to the reduced neck 8 of a stuffing box 9, the latter including any usual compressing gland 10 and packing or stuffing ring 11, the latter being formed of a yieldable material.

Insertible slidably through the gland 10, stuffing ring 11, stuffing box 9, neck 8, into the upper section 3, is a removable liquid discharge tube 12, this tube when inserted being yieldably embraced by the ring 11 to prevent escape of gas at this point when the valve 5 is open. The bottom end of the tube 12 is preferably rounded or pointed, in order to permit the ready insertion of the same through the ring 11, into substantially the position shown in Fig. 2. The tube 12 is perforated as shown at 13, at a point adjacent the bottom end thereof, to allow the heavy liquid in the bottom of the main M to enter said tube. The upper end of said tube 12 is provided with a valve 14, which may be an ordinary form of gas cock.

It will thus be seen that the interior of the member 3, and the spaces adjacent thereto when the parts are in the relation shown in Fig. 2, form a receiver which, when the valves 5 and 14 are closed, is a closed receiver, but which receiver can be connected with the main, by opening the valve 5.

The tube 12 having been inserted to about the position shown in Fig. 2, and the valve 14 being closed, the valve 5 is opened to the position shown in Fig. 1, and the tube 12 forced down through the port 6 into the main, until the end of said tube rests upon the inner surface of the bottom of said main as shown in Fig. 1. By then opening the valve 14, the liquid accumulated in the bottom of the main may be removed, through the tube 12. As soon as the liquid has been removed, and as soon as gas begins to issue from the upper end of pipe 12, the valve 14 is closed, the tube raised to the position shown in Fig. 2, the valve 5 closed and the tube 12 can then be removed if desired.

While I have particularly described this invention in connection with the removal of the heavy liquid from a gas main, it is obvious that the device can be used in the same manner for the removal of water or heavy liquid which may separate out from oil in transit in a pipe line.

What I claim is:

A method of withdrawing accumulated heavy liquid from mains, pipe lines and the like, said method comprising providing at a low point of said main, a permanently at-

tached valved connection to a closable receiver, slidably inserting a valved tube having an opening at its lower end into said receiver and thereby closing said receiver against the escape of the fluid normally held in said main, thereafter while the valve in said tube is in a closed position, opening the valve in said connection and inserting the tube through said valve into the bottom of the low point of said main, opening the valve in said tube and drawing off through said tube the accumulated liquid which is heavier than the normal contents of said main, and thereafter closing the valve in said tube without drawing off any considerable amount of the normal contents of said main.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

HARRY JAMES McGILVRAY.

Witnesses:

J. W. Ross,

Orth Talbott.