J. S. DONOHUE.

CLEAN-OUT SERVICE CONNECTION.

APPLICATION FILED NOV. 20, 1915.

1,172,958. Patented Feb. 22, 1916.

FIG. 1

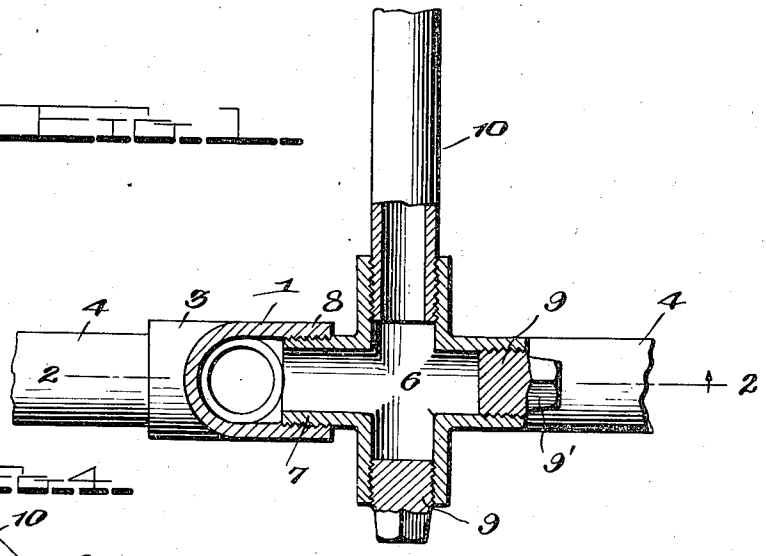


FIG. 4

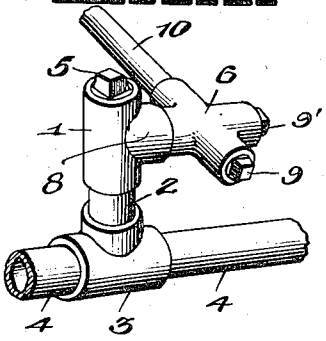


FIG. 3

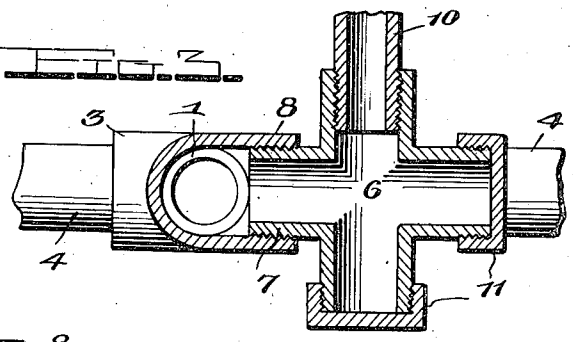
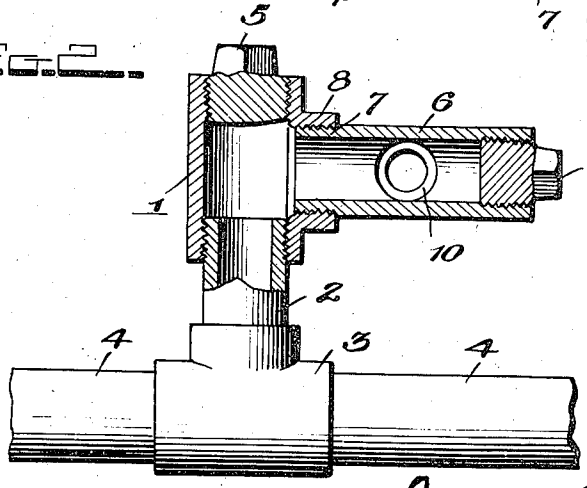


FIG. 2



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CLEAN-OUT SERVICE CONNECTION.

1,172,958. Specification of Letters Patent. Patented Feb. 22, 1916.

Application filed November 20, 1915. Serial No. 62,574.

To all whom it may concern:

Be it known that I, JAMES S. DONOHUE, a citizen of the United States, residing at Washington, in the District of Columbia, have invented new and useful Improvements in Clean-Out Service Connections, of which the following is a specification.

This invention relates to certain new and useful improvements in clean-out service connections and pertains more particularly to connections of this type used with gas mains.

The customary practice in connecting house service pipes to a gas main, is to employ nipples and L couplings with the objection that, when the service pipe becomes clogged with rust or carbon deposits and affords an inadequate supply of gas, it becomes necessary in wiring the pipes (for the purpose of loosening the deposits preliminary to using an air pump to force the deposits so loosened into the street end of the pipe) to cut the service pipe so as to permit of this wiring, entailing the further objection of necessitating the interposition of a coupling in the cut pipe upon completion of the cleaning out process.

The present invention has for its object to completely avoid the necessity of cutting the service pipe, and briefly embodies a T-connection applied to the service pipe at the point of union with the main and a cross which is directly threaded into one arm of the T and with the T is provided with plugs or caps, which upon removal provide a straight passage for the wire employed in displacing the rust and carbon deposits, allowing such wiring to be proceeded with as though the service pipe had been cut, and in fact with less work than in cases where such cutting has been resorted to, due to the wire being inserted in but one place, namely at the main juncture with the service pipe, whereas in cutting, in most cases the wire must be inserted in the service pipe at opposite ends of the cut, thus requiring two wiring operations, as distinguished from the one which the present case only necessitates.

Further, the invention aims to provide a connection which can be made in its entirety from stock, or standard couplings and one which enables the wiring to be practised by cutting a smaller hole in the street than in cases where the service pipe in addition must be cut to allow the wiring.

Other and further objects of the invention will be later herein set forth and manifested in the course of the following description.

In the drawings: Figure 1 is a view, showing the invention in horizontal section; Fig. 2 is a section on the line 2—2 of Fig. 1; Fig. 3 is a view similar to Fig. 1, but showing a slightly modified form of the invention; and Fig. 4 is a perspective view of the invention.

In proceeding in accordance with the present invention, a T, 1 is employed and is connected to a nipple 2, which latter is in turn connected to the T, 3 of the gas main 4. The T, 1 has a plug 5 screwed thereinto. A cross 6 is provided with male threads 7 screwed into the horizontal arm 8 of the T, 1. The other three arms of the cross may have female threads as depicted in Fig. 1, to receive the two plugs 9 and 9′ and the service pipe 10, or as illustrated in Fig. 3, the cross may have three of its arms provided with male threads, one of the latter being screwed into the arm 8 of the T while the other two arms are provided with caps 11, which function the same as the plugs, namely, to close the arms of the T and cross, and upon removal to allow access to the pipes for the purpose of wiring.

In operation, if the service pipe 10 becomes clogged, plug 9, Fig. 4, is removed and the wire may be passed directly from a point at the main through the pipe, and the deposits loosened and subsequently blown out of the pipe by means of the usual air pump which is attached at the house end of the pipe. Similarly, plug 9′ may be removed and a wire passed through the cross and into the T, 1 for the same purpose, and plug 5 of the T, 1 may be removed for purpose of wiring should the vertical arm of the T be desired to be cleaned. Thus, in accordance with the present invention the wire is passed in a straight path through the service pipe from the main or street end into the house end, and cutting of the service pipe with the resultant application of a coupling to the cut place, is eliminated. Further, the size of the hole which must be cut in the street or other location of the juncture of the main and service pipe is reduced, that is to say a smaller hole can be cut in the street whereas a large hole would need be cut in cases where the service pipe is cut in order to provide

ample room in which the operations of cutting the pipe, threading the ends where cut, and applying the coupling may be performed. Further, it will be apparent that the T and cross constituting the invention may be of standard or stock manufacture, the only requisite being that the cross must possess one male thread enabling same to be threaded into one of the female threads of the T, with resultant economy in practice of the invention, and in addition deposits can be removed with equal facility from the cross and T by mere removal of the plugs or caps, which allows a straight passage of the cleaning wire, whereas with the L couplings and nipples, this cleansing has been difficult and tedious owing to the tortuous passage which the wire must pursue by the L's and nipples forming such passage.

What is claimed is:

1. In a clean-out service connection, in combination with the gas main and service pipe, a T having one of its arms connected to the main, a cross having one of its arms provided with male threads threadedly connected to the female threads of one of the arms of the T, and having another arm connected to the service pipe, removable closures for the other two arms of the cross and a removable closure for the other arm of the T.

2. In a clean-out service connection, a T adapted for connection with the gas main, and a cross having one arm threadedly connected to one arm of the T and having a second arm adapted for connection with the service pipe, and removable closures for the other arms of the cross.

3. In a clean-out service connection, a cross adapted to have one arm connected to the service pipe, means to connect another arm to the gas main, and a removable closure for another arm of the cross in alinement with said first arm thereof.

4. In a clean-out service connection, a cross adapted to have one arm connected to the service pipe, a T connected to another arm of the cross, removable closures for the other arms of the cross, said T being adapted for connection to the main, and a removable closure for the other arm of the T.

5. In a clean-out service connection, a cross adapted for connection to a service pipe, a removable closure for the cross opposite to its point of connection with the service pipe to provide a straight passage into the latter, means to connect said cross to the main, and a removable closure for the cross located opposite to said main connecting means.

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

JAMES S. DONOHUE.

Witnesses:
JAMES L. CRAWFORD,
ROYCE A. RUESS.