Nov. 15, 1949 C. E. NORTON 2,487,939

HOUSE SERVICE PIPE CONNECTION

Filed Nov. 16, 1948

Fig. 2.

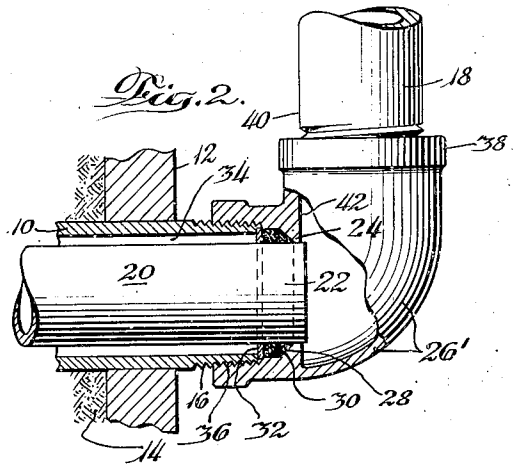
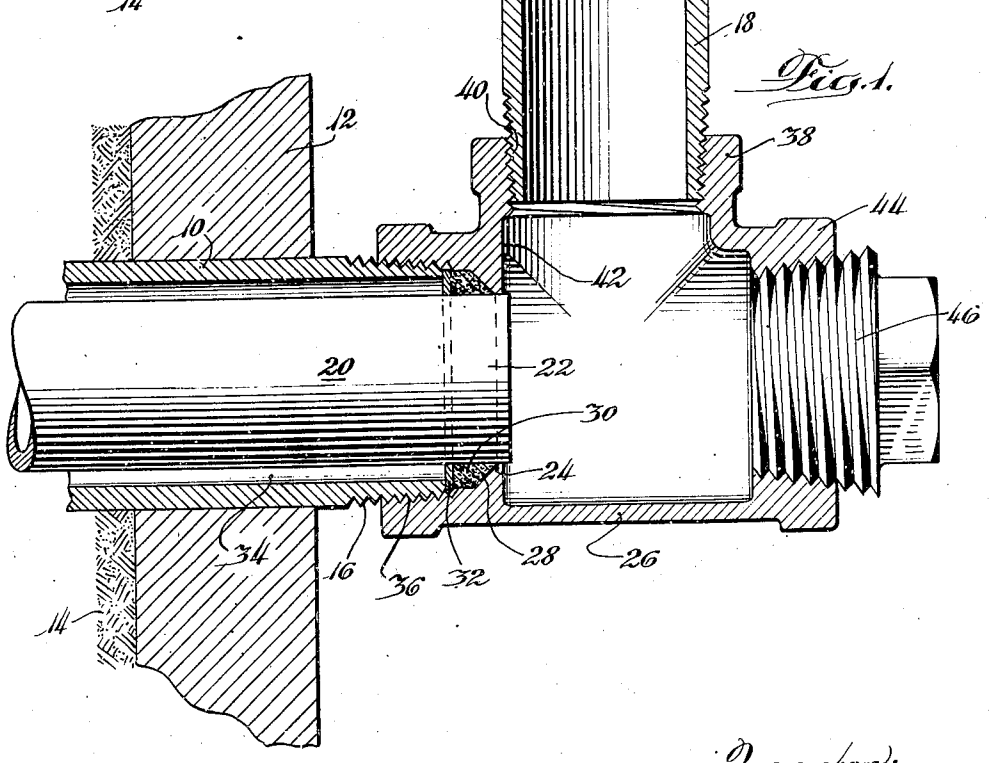


Fig. 1.



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Patented Nov. 15, 1949

2,487,939

UNITED STATES PATENT OFFICE

2,487,939

HOUSE SERVICE PIPE CONNECTION

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Application November 16, 1948, Serial No. 60,184

1 Claim. (Cl. 285—210)

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My invention relates to house service pipe connections and is particularly concerned with a connection for use in repairing a building service pipe installation where the building service pipe has become corroded and leaks or has become unserviceable for any other reason.

After gas service pipes have been in the ground for many years, it frequently happens that such pipes become corroded and leak, and thereafter are useless for their intended purpose. It is an expensive time-consuming procedure to dig up the service pipe connecting an individual house, apartment or other building with the street service main and replacing such service pipe with another service pipe of conventional construction. It has therefore become common practice to leave such corroded service pipes in place and to pass a copper tube therethrough which is sealed at one end to the street main and at the other end to the riser which connected the old service pipe with the gas meter. Such an installation requires only a small hole at the point where the service pipe joins the street main and appropriate changes in the basement of the building where the service pipe is connected to the riser leading to the gas meter. One of the difficulties encountered in such installations, however, has been in effecting a connection between the copper tubing and the riser which could be easily and quickly installed. Heretofore such connections have been complicated and expensive and have required that at least the lower end of the riser be located a greater distance from the basement wall than was required by the original installation. In many instances the necessity for moving at least the lower end of the riser away from the basement wall involved complications with other piping or structural members and necessitated elaborate changes in the piping arrangements. Even at best the means heretofore available for connecting the copper tubing in sealed relationship to the lower end of the riser was time-consuming and expensive both in workman's time and connecting fittings.

An object of my invention is to overcome the difficulties heretofore involved in connecting such a copper tubing to the riser by providing a simple and inexpensive connection which permits the riser to remain as close to the basement wall as in the original installation.

Other objects and advantages will become apparent as the description proceeds.

In the drawing:

Fig. 1 is a vertical sectional view of an installation embodying a preferred form of my invention; and

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Fig. 2 is a similar view on a reduced scale embodying a second preferred form of my invention.

In Fig. 1 I have shown the original service pipe 10 as passing through the basement wall 12 of the building and into that portion of the ground 14 which is located between the basement wall 12 and the service main which usually but not necessarily runs under the street in front of the house or other building. The inner end of the service pipe 10 is provided with a conventional pipe thread 16 which in the original installation served to attach the service pipe to the lower end of the riser 18 through a conventional T or L fitting, not shown.

The riser 18 is ordinarily located only a short distance inwardly of the inner surface of the basement wall 12 and leads upwardly to the usual gas meter (not shown) and through such gas meter to the gas distributing pipe in the home or other building. It will of course be understood that in the original installation the service pipe 10 is composed of one or more sections of rigid pipe with its other end threadedly attached to the street service main.

In Fig. 1 a tubing 20 of copper or other suitable material has been passed through the service pipe 10 and has its inner end 22 located in the throat 24 provided by the T-connection 26. The throat 24 has a tapered annular surface 28 forming a seat or abutment for one end of an annular gasket 30 of resilient or other suitable material compressed by an annular metal washer 32 to form a gas-tight seal between the T-connection 26 and the outer wall of the copper tubing 20. In this manner gas entering the T-connection through the copper tubing 20 is prevented from entering the space 34 between the outer wall of this tubing and the inner wall of the old service pipe 10. It will be understood that the other end of the space 34 is similarly sealed off from the street main so that the space 34 becomes in effect a dead space into which no gas can enter. In other words, the leaks in the service pipe 10 resulting from corrosion thereof are no longer important because this service pipe has ceased to serve as a means for confining the gas passing therethrough from the street main to the building.

The metal washer 32 which holds the gasket 30 compressed against the outer wall of the tubing end 22 and complementary surfaces of the T-connection 26 to form a gas-tight seal therebetween engages the inner end of the service pipe 10. The T 26 has oversized pipe threads 36 which

engage the conventional pipe threads 16 of the service pipe 10 so that when the T-connection 26 is screwed thereon the gasket 30 is firmly compressed into sealing condition and positioning of the T-connection 26 on the service pipe 10 is not limited by engagement of the oversized threads 36 with the standard threads 16. In other words, there is still leeway available between these threads for further clockwise rotation of the T 26 with respect to the pipe 10 after the gasket 30 has been properly compressed.

The side outlet 38 of the T-connection 26 is threadedly attached to the lower end of the riser 18 which leads upwardly to the conventional gas meter. It will be noted that the wall portion 40 of this side connection which is located closest to the building wall is substantially in the same plane as the inner wall 42 of the throat 24. This arrangement in combination with the positioning of the gasket 30 relative to the threads 36 makes it possible to provide a novel connection which permits the riser 18 to remain in its original location with respect to the basement wall 12 and avoids the backward displacement of this riser necessitated by the prior art connections.

The T-connection 26 is provided with a second outlet 44 which has conventional pipe threads whereby this outlet may be connected to a pipe leading to another meter or to any other gas-consuming equipment. In most installations this second outlet is not needed and is closed by suitable means such as the plug 46 shown in Fig. 1.

The installation shown in Fig. 2 is identical to that shown in Fig. 1 except that an L-connection 26' is substituted for the T-connection 26 of Fig. 1.

It will be apparent from the foregoing description taken in connection with the accompanying drawing that I have provided a simple, compact, and inexpensive connection which may assume a variety of forms. This connection for the first time provides a means for quickly and effectively connecting to the lower end of the gas

riser a gas service tube passed through the old service pipe and sealed therefrom without requiring that the lower end of the riser be located at a greater distance away from the inner surface of the basement wall than was and is conventional practice in original installations.

While I have illustrated and described only two forms of my invention, it is to be understood that my invention is capable of assuming other forms and that my invention includes all modifications, variations, and equivalents coming within the scope of the appended claim.

I claim:

A gas pipe fitting for linking to the gas riser of a building a tubing passed through the gas service pipe leading from such riser to a street supply main, such fitting comprising an integral end having an oversized female thread adapted directly to engage the male thread at the inner end of such service pipe, a tubing-receiving throat having a tapered wall portion inwardly of said oversized thread, said tapered wall portion being adapted to engage and compress a gasket confined between said wall portion, said tubing, and an end of a service pipe to which said thread is secured, and an outlet located at a substantially right angle to the plane of said throat and having a wall portion located substantially in said plane, said outlet being provided with threads for connection to a riser leading to a gas meter.

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