Feb. 16, 1926. 1,573,410

F. E. McCABE ET AL

TEST FITTING

Filed Feb 7, 1923 2 Sheets-Sheet 1

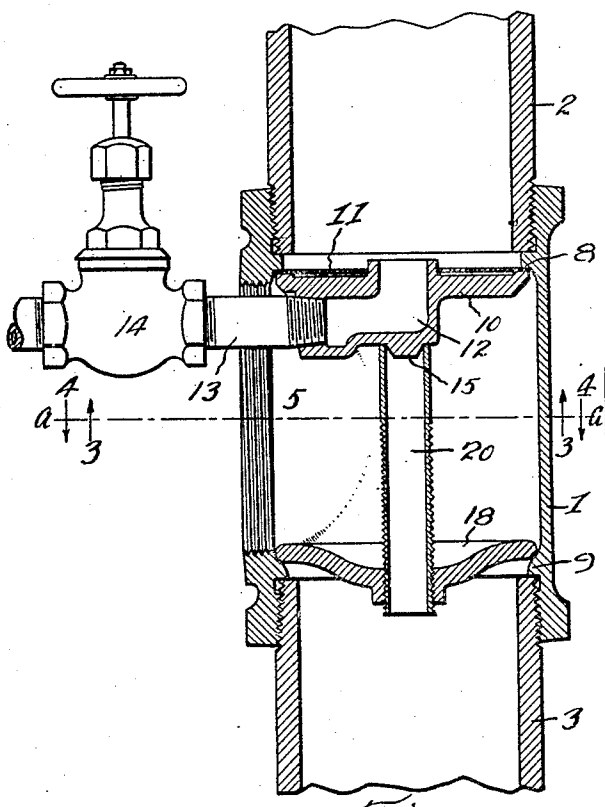


Fig. 1

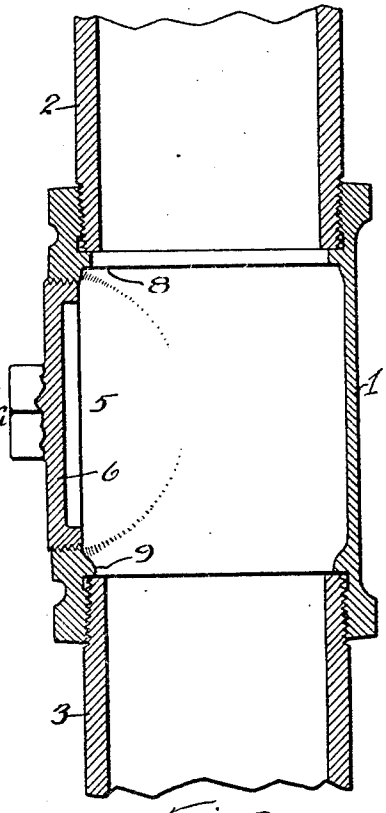


Fig. 2

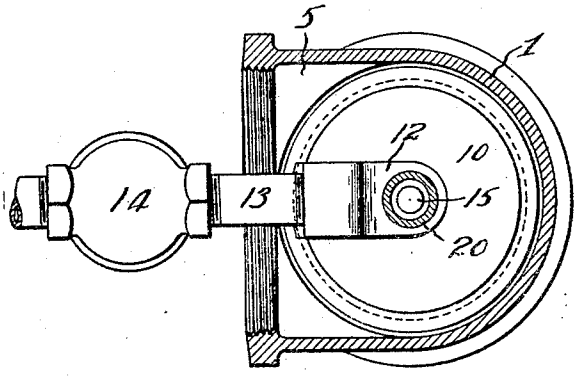


Fig. 3

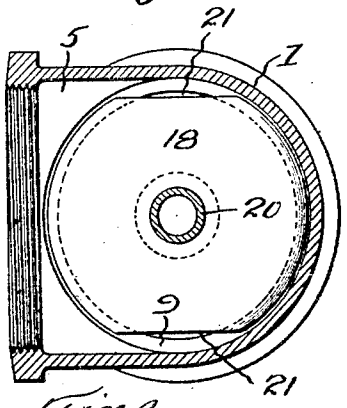


Fig. 4

Inventors
Frank E. McCabe
Michael L. Rosheko
By Hull, Brock & West
Attys.

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Filed Feb. 7, 1923 2 Sheets-Sheet 2

Fig. 5

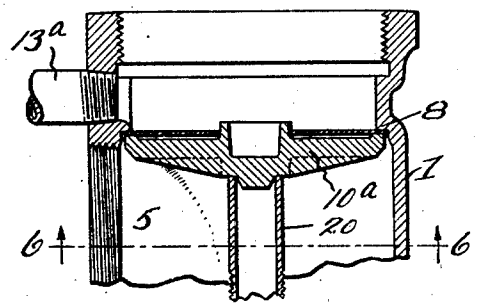
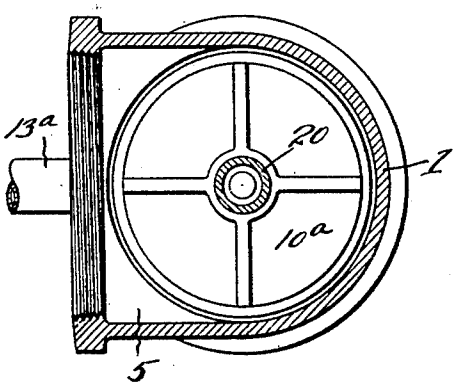


Fig. 6



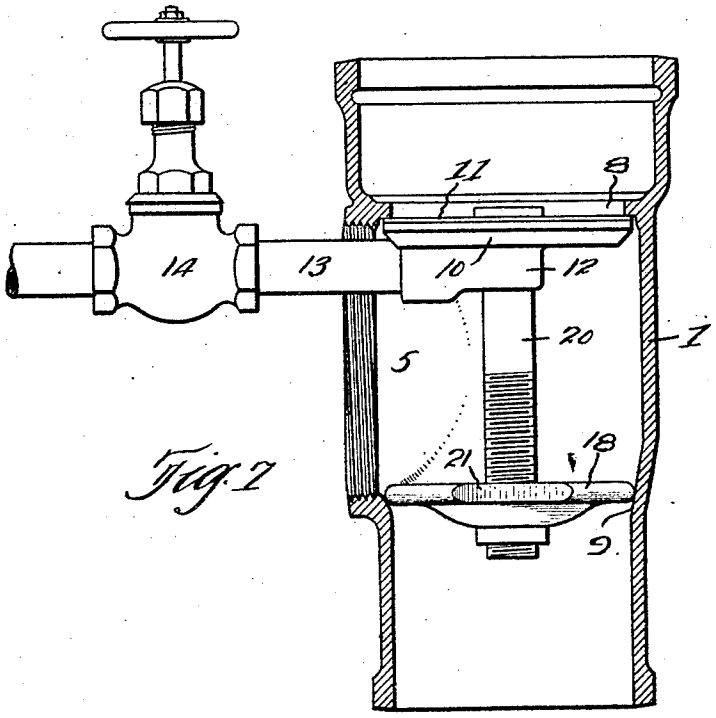


Fig. 7

Inventors
Frank E. McCabe
By Michael L. Roshetko
Hull, Brock & West
Attys.

Patented Feb. 16, 1926. 1,573,410

UNITED STATES PATENT OFFICE.

FRANK E. McCABE, OF CHAGRIN FALLS, AND MICHAEL L. ROSHETKO, OF CLEVELAND, OHIO, ASSIGNORS TO THE GRABLER MANUFACTURING COMPANY, OF CLEVELAND, OHIO, A CORPORATION OF OHIO.

TEST FITTING.

Application filed February 7, 1923. Serial No. 617,465.

To all whom it may concern:

Be it known that we, (1) FRANK E. McCABE, (2) MICHAEL L. ROSHETKO, citizens of the United States, residing at (1) Chagrin Falls, (2) Cleveland, in the county of Cuyahoga and State of Ohio, have invented a certain new and useful Improvement in Test Fittings, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings.

This invention relates to that class of devices known as test fittings which are used for proving pipe systems of buildings, or for locating defects or leaks therein, and by means of which the work may be tested in sections without interfering with the progress of building construction.

The embodiments of the invention herein disclosed are designed especially for use with risers and drains, so called, although they may be employed with other than vertical conduits. When installed, the shell of the fitting becomes a permanent part of the system and may be used as a sanitary clean out.

The main objects of our invention are to provide a device of the aforesaid character which is simple of construction and which comprises few parts; which is especially convenient of use; is very efficient; requires no special tools for installing or manipulating it; and which involves an element that serves during the installation as a guard against tools or other objects being dropped down the riser or drain.

The foregoing objects, with others appearing hereinafter, are attained in the constructions illustrated in the accompanying drawings wherein Fig. 1 is a sectional side elevation of one form of our improved test fitting incorporated in a riser or drain, the fitting being shown in readiness for a test; Fig. 2 is a similar view showing how the fitting may be plugged after the test has been completed; Figs. 3 and 4 are sections on the line *a*—*a* of Fig. 1, the former as though looking in the direction of the arrows 3, and the latter as though looking in the direction of the arrows 4; Fig. 5 is a fragmentary sectional view of a modified form of the invention; Fig. 6 is a section on the line 6—6 of Fig. 5; and Fig. 7 shows the invention incorporated in a bell-and-spigot type fitting.

The fitting comprises a shell which is in the nature of a T that is designed for connection at its opposite ends with sections of a pipe or conduit and which has a lateral branch or extension through which access to the interior of the shell may be readily gained and which may be closed by a plug or other suitable closure after the test has been made.

The shell is designated 1, and, as to the type shown in Figs. 1 to 6, is internally threaded at its opposite ends for the reception of the threaded ends of pipe or conduit sections 2 and 3. As previously stated, the shell is in the nature of a T, and its lateral branch is designated 5. The outer end of the branch is shown as internally threaded for the reception of the plug 6, although obviously a closure of other approved character might be substituted therefor. A seat 8 extends about the interior of the shell and is situated between the lateral branch 5 and one end of the fitting—the top end, as the parts are shown in the drawing. Occupying a similar position below the lateral branch 5, is an abutment portion or shoulder 9.

For the purpose of this disclosure, and so far as our invention is concerned, the shells shown in all views of the drawing may be regarded as the same, and, accordingly, similar reference characters designated the corresponding parts of the various shells. The shell illustrated in Fig. 7 happens to be of the so-called bell-and-spigot type, the upper end being enlarged so that the pipe or conduit section above may telescope into it, while its lower end is contracted to telescope within the bell of a pipe or conduit section below, the joints being calked as usual.

Arranged for engagement with the seat 8, in the embodiment of the invention illustrated in Figs. 1 to 4 inclusive and in Fig. 7, is a closure 10 in the form of a disk, said closure having a gasket 11 of rubber or other suitable packing material applied to its upper face and the edge of which is arranged to be compressed between the peripheral portion of the closure and the seat 8 so as to effect a liquid tight joint. The closure is shown as having formed integral with it an elbow 12 which opens at its inner end above the closure and at its outer end

below and adjacent the edge thereof. The outer end of the elbow is internally threaded for the reception of a pipe 13. The flow of water or other testing fluid through the pipe 13 may be controlled by a valve 14. A positioning boss 15 depends from the underside of the elbow 12 and is central with respect to the closure 10.

A base 18 is arranged to engage the abutment portion or shoulder 9, and the same has an internally threaded aperture at its center within which operates the threaded portion of a post 20, the post being hollow and preferably formed of a section of pipe. At its upper end the post engages the elbow 12 about the boss 15, the boss serving to properly position the upper end of the boss centrally with respect to the closure.

In the use of this form of the invention, after the riser or drain has been installed, with the shell 1 incorporated as a permanent part thereof, the base 18 is inserted through the lateral branch 5 and dropped upon the abutment portion or shoulder 9, the post 20 being screwed down through the base sufficiently to make the insertion of the base easy and prevent interference with the subsequent insertion of the closure 10. To enable the base to be passed through the opening of the branch 5, it is cut away at diametrically opposite points, as indicated at 21. The closure 10, carrying the gasket 11, is next inserted and brought up into engagement with the seat 8, after which the post 20 is screwed upwardly into engagement with the closure. By means of a pipe wrench or other suitable tool, engaged with the smooth part of the post, the post may be turned in a direction to elevate it and press the closure very firmly against the seat to effect a leakproof joint. After the supply pipe 13 is properly connected to a source of testing fluid, such as the city water supply, the valve 14 is opened to allow the testing fluid or water to rise within the conduit above the fitting to a given elevation, whereupon the valve 14 is closed and the testing fluid is left standing for a given period of time for the purpose of determining where, if at all, the conduit section leaks. After the test has been made, the fluid may be drained off through the pipe 13 by disconnecting it at some point from the supply and opening the valve 14. With the testing fluid drained from the conduit, the post 20 is lowered, the closure 10 removed, and the base 18 lifted from the shell, after which the lateral branch 5 of the shell may be closed, as by means of the plug 6.

The base 18, aside from its constituting a support for the post 20, serves as an effective means for preventing objects, such as wrenches or other tools, being dropped down the riser or drain.

In the form of our invention illustrated in Figs. 5 and 6, the supply connection for the testing fluid is removed from the closure and is made through the wall of the fitting above the seat 8. The testing fluid pipe is designated 13^a, and the disc closure 10^a. In all other respects this modification of the invention may be identical with that above described.

Having thus described our invention, what we claim is:

1. A test fitting of the character set forth comprising a shell designed for connection at opposite ends with conduit sections and having an opening in its side, an annular seat extending about the interior of the shell between said opening and one end of the shell, an abutment portion opposed to the seat and situated between the aforesaid opening and the opposite end of the shell, a disk insertable through said opening for engagement with the seat, said disk having a central boss, a base insertable through the opening for engagement with the said abutment portion, a tubular post having screw connection with the base centrally thereof and arranged to receive the boss of the disk, and means for introducing a testing fluid into the conduit beyond the side of the disk adjacent said seat.

2. A test fitting of the character set forth comprising a shell designed for connection at opposite ends with conduit sections, said shell having an opening in its side, an annular seat extending about the interior of the shell between said opening and one end of the shell, an abutment portion opposed to said seat, a disk insertable through said opening for engagement with the seat, the disk having formed integral with it an elbow which opens at its inner end through the side of the disk adjacent the seat and at its outer end through the side thereof remote from said seat, a base insertable through the aforesaid opening independently of the disk for engagement with the abutment portion, and a post threaded within the base for engagement with the disk, said post serving when rotated in an appropriate direction with respect to the base to force the disk against the seat.

3. A test fitting of the character set forth comprising a shell designed for connection at opposite ends with conduit sections, said shell having an opening in its side, an annular seat extending about the interior of the shell between said opening and one end of the shell, an abutment portion opposed to said seat and situated between said opening and the opposite end of the shell, a disk insertable through said opening for engagement with the seat, the disk incorporating an elbow which opens at its inner end through the side of the disk adjacent the seat and at its outer end near the edge of the disk on the side thereof remote from

said seat, the elbow having at its angle a positioning boss that is central with respect to the disk, a base insertable through the aforesaid opening independently of the disk for engagement with the abutment portion, said base having a central threaded aperture, and a tubular post threaded through said aperture and arranged to engage said positioning boss and force the disk against the seat when the post is screwed upwardly.

In testimony whereof, we hereunto affix our signatures.

FRANK E. McCABE.
MICHAEL L. ROSHETKO.