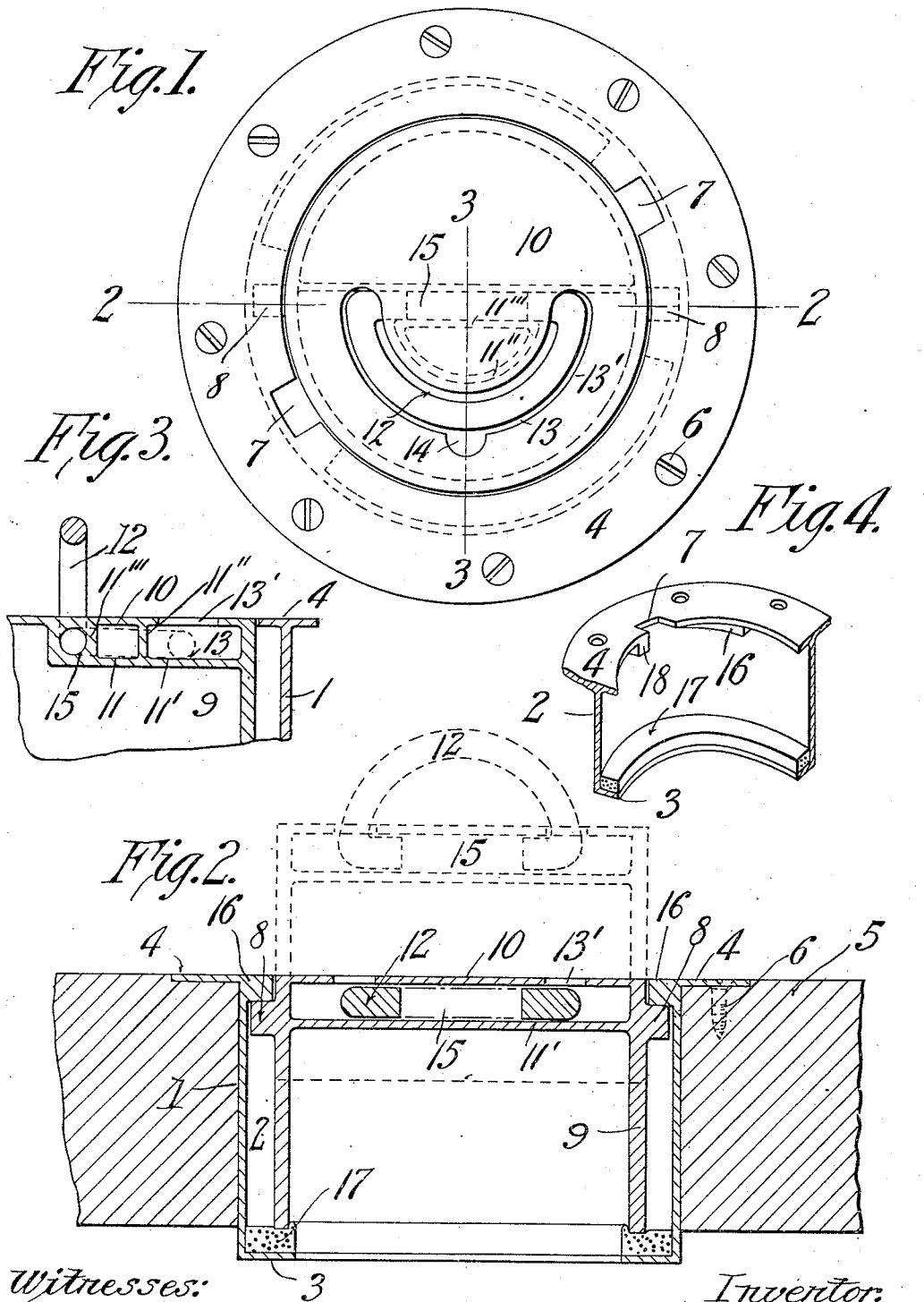


W. C. SHEPARD.
CLOSING DEVICE FOR CELLAR FIRE HOLES.
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Patented May 17, 1910.



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UNITED STATES PATENT OFFICE.

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CLOSING DEVICE FOR CELLAR FIRE-HOLES.

958,550.

Specification of Letters Patent.

Patented May 17, 1910.

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To all whom it may concern:

Be it known that I, WILLIAM C. SHEPARD, a citizen of the United States of America, and resident of Pittsfield, in the county of Berkshire and State of Massachusetts, have invented certain new and useful Improvements in Closing Devices for Cellar Fire-Holes, of which the following is a full, clear, and exact description.

This invention pertains to improvements in floor plates for fire holes, and more particularly relates to a floor plate which is equipped with a water-tight plug or closure, which normally closes an opening in the floor overlying the cellar or basement, through which opening, in case of fire in the cellar or basement, the fire hose is passed to enable the source of conflagration to be quickly reached and extinguished.

The object of the invention is to provide a simple effective device of this nature, the closure of which may be quickly removed in case of fire, and which when in locked position will effectually resist the entrance of water therepast, so that the floor may be washed or flushed with water without danger of leakage thereof into the cellar or basement.

Further and other objects will appear in the course of the following specification.

Referring to the accompanying drawings, Figure 1, is a top plan view of the invention, Fig. 2, a section on line 2—2, of Fig. 1, Fig. 3, a fragmentary sectional view on line 3—3, of Fig. 1, showing the wrench handle in raised position, and Fig. 4, a fragmentary perspective of the floor plate casing *per se*.

1, designates the casing or floor plate, which is of annular form and which consists of a cylindrical body 2, formed at its base with an intumed annular flange 3, and at its top with a flange 4, the latter projecting on opposite sides of body 2. The outer portion of flange 4, is countersunk into the floor 5, and is secured thereto as by means of screws 6, depicted in Fig. 2.

At diametrically opposite points on the inner portion of flange 4, there are a pair of openings 7, designed to receive the diametrically opposite and outwardly projecting studs 8, of the plug or closure 9. This closure consists of a cylindrical body having an integral top plate 10, formed with a housing 11, for the handle 12, which latter acts as a wrench in enabling rotation of the closure to permit of its removal. The hous-

ing involves in its formation a horizontal web 11', which forms a handle seat normally occupied by handle 12, the latter being accessible through semicircular slot 13', and finger opening 14, by means of which the handle may be uplifted into raised operative position. As shown the handle is approximately semi-circular in form and has its ends turned inwardly to be disposed in a channel 15, underlying the plate 10. The horizontal web 11', which underlies and is spaced from top plate 10, is strengthened by the vertical web 11'', which as depicted in Fig. 1, in dotted lines, is of semi-circular form, its connecting part 11''', forming one wall of channel 15, (see Fig. 3.) Since top plate 10 projects above the handle when the latter is in inoperative position it serves to protect the same.

On the under side of the inner portion of flange 4, there are formed two cam-faced lugs 16, one adjacent each opening 7, to one side of the latter. As depicted in Fig. 2, these lugs are designed to engage the studs 8, and since they effect a wedging action on the studs, closure 9 will be forced downwardly bringing the lower edge of its body into intimate contact with a rubber or compressible gasket 17, which seats on flange 3, compressing the latter and effecting a sealed water-tight joint between the closure and the casing or floor plate. Manifestly the greater the turning movement of the closure toward the ends of lugs 16, of greatest height, the greater the compression of gasket 17. On the side of each opening 7, opposite to that on which lugs 16, are located is a stop or abutment 18, whose function it is to engage the studs 8, and prevent further rotation thereof during the act of removal of the closure, the studs when in alinement with openings 7, being then in position for removal from the casing by mere uplifting movement, as is manifest. Handle 12, when in raised position serves the function of a wrench enabling the necessary rotation of the closure to be effected so as to bring the trunnions thereof into register with openings 7, permitting disengagement of the parts.

Commonly in cases of fire in cellars or basements, it has been the custom to chop or cut a hole through the floor at the ground level. By equipping such floors, at determined locations, with this invention, the above objection is not only completely elim-

inated, but moreover the time saved in gaining access to the cellar or basement is a desideratum which is invaluable in enabling attack of the flames at their inception, and prior to their having opportunity to effect material damage.

It is designed to provide holes at various places through the ground flooring, for the passage through any of them of the hose, enabling connection with the latter in a basement of the cellar pipe with the equipments hereinabove particularly described for each of said holes.

What I claim is:—

1. A floor plate for fire holes, and the like, consisting of a casing embodying a cylindrical body arranged in said hole and formed with an inwardly extending base flange and a top flange which extends on opposite sides of said body, a compressible gasket seating on the base flange, the inner portion of the top flange being formed with a pair of diametrically opposed openings, a cam faced lug on the under face of the inner portion of said top flange on one side of each of said openings, a stop on said flange on the opposite side of each opening, a closure consisting of a body having its lower edge engaging said gasket, a pair of opposite studs on said body designed to engage said lugs and to have their rotative movement restricted by said stops, and means to enable the rotation of said closure.

2. A floor-plate for a fire-hole comprising a cylindrical tubular shell having at its top an outwardly extending attachment flange and an inwardly extending annular flange provided on its under side with cam surfaces and having oppositely located recesses, and said shell having at its lower end an inwardly extending annular flange; and a cylindrical cup-shaped closure provided with outwardly extending studs at its upper portion adapted to be passed through said recesses to occupy a position below the upper flange of said cylindrical shell and by rotative movement to have engagements with the aforesaid cam surfaces and adapted by

its lower circular edge to acquire a seating on the lower flange of said shell, and a compressible packing material between the upper surface of the said lower flange and the lower edge of the cup-shaped closure.

3. A floor-plate for a fire-hole comprising a cylindrical tubular shell having at its top an outwardly extending attachment flange and an inwardly extending annular flange provided on its under side with cam surfaces, having oppositely located recesses, and provided at the sides of said recesses opposite the locations of the cam surfaces with depending stop lugs, and said shell having at its lower end an inwardly extending annular flange; and a cylindrical inverted cup-shaped closure provided with outwardly extending studs at its upper portion adapted to be passed through said recesses to occupy a position below the upper flange of said cylindrical shell and by rotative movement to have engagements with the aforesaid cam surfaces and adapted by its lower circular edge to acquire a seating on the lower flange of said shell, and a compressible packing material between the upper surface of the said lower flange and the lower edge of the cup-shaped closure.

4. A floor plate for fire holes, consisting of a casing disposed in the hole, a closure in said casing, said casing having a top plate, a horizontal web therebelow and spaced therefrom, a vertical connecting web between the horizontal web and the top plate, a handle having inturned ends engaging a part of the connecting web and designed to have its major portion seat on said horizontal web, said top plate having an opening cut therethrough so as to enable access to said handle to permit the latter to be raised and lowered therethrough up from and down to its seat.

Signed by me at Pittsfield, Mass., in presence of two subscribing witnesses.

WILLIAM C. SHEPARD.

Witnesses:

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