July 13, 1926. 1,592,382

A. N. MUNN

SOIL PIPE CLEAN-OUT CLOSURE DEVICE

Filed Sept. 8, 1924

Fig.1.

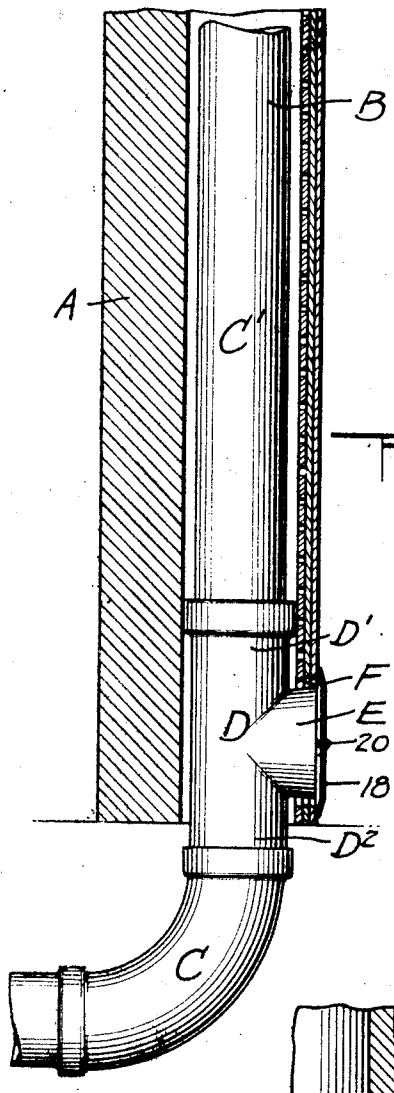


Fig.2.

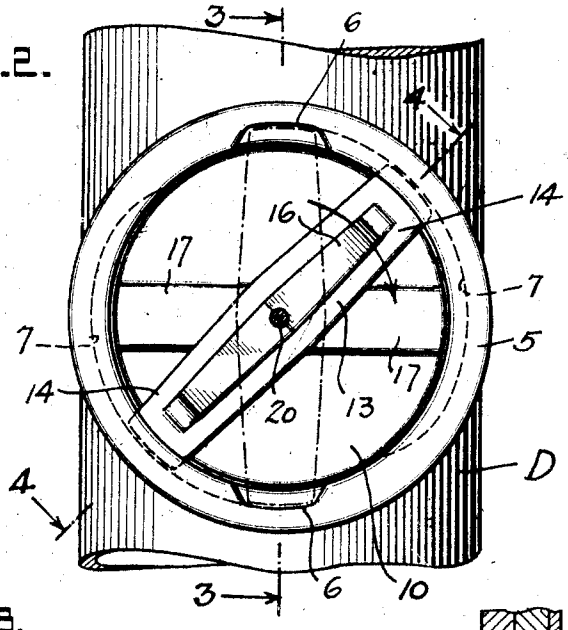


Fig.3.

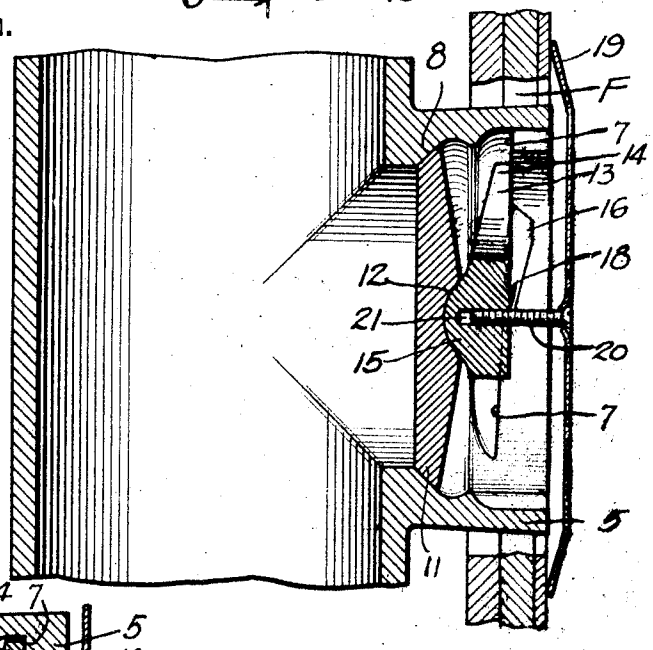
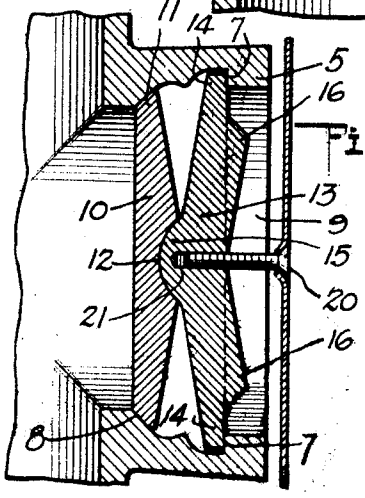


Fig.4.



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UNITED STATES PATENT OFFICE.

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SOIL-PIPE-CLEAN-OUT CLOSURE DEVICE.

Application filed September 8, 1924. Serial No. 736,651.

My invention relates to clean-out closures for soil pipes, curb boxes and the like, and a purpose of my invention is the provision of a clean-out closure which obviates the necessity of a clean-out plug requiring lead and oakum and the time incident to assembling, greatly facilitates the closing and opening of the clean-out, and when in closing position forms the fluid-tight closure through which the escape of noxious gases is prevented.

It is also a purpose of my invention to provide a closure of the above described character which includes a wall plate adapted to cover the closure device and present a neat and attractive appearance within a room, the wall plate being removable to expose the device and thus permit the application of the necessary tool to effect its removal.

A still further object of my invention is to provide a structure of this character including a T-coupling of novel design adapted to accommodate itself to standard soil pipes and the like, and one that can be instantly installed without requiring changes in the construction of the soil pipe or its adjuncts.

I will describe only one form of soil pipe clean-out closure device embodying my invention, and will then point out the novel features thereof in claim.

In the accompanying drawings—

Figure 1 is a vertical section through a wall showing an application of my invention to a soil pipe;

Figure 2 is a front elevation of a portion of a soil pipe showing my invention applied;

Figure 3 is a vertical section on the line 3—3 of Figure 2; and

Figure 4 is a section on the line 4—4 of Figure 2.

In the drawings, A represents a wall and B the soil pipe mounted therein in the usual manner. C is an elbow of the stack of the soil pipe and D is my improved form of T-coupling, having vertical branches D′ and D² which respectively join the stack C′ and the elbow C together. The horizontal branch E of the elbow extends through an opening F in the wall A so that access can be quickly had thereto as desired.

The T-coupling D which forms a novel part of my invention has its horizontal branch E provided with an annular flange 5 having diametrically opposite slots 6—6 which open to spiral or thread grooves 7—7 which are continued in an inward direction from said flange 5. At the joinder of the branch E with the body portion of the coupling D is an annular-beveled-ground valve-seat 8 whose diameter is slightly less than the opening 9 defined by the flange 5.

A valve disk 10 of a size to freely pass through the opening 9 is normally confined in the branch E, and same is formed with a ground-beveled face 11 to coact with the seat 8 as clearly shown in Figures 3 and 4. This valve disk is gradually increased in thickness toward its center and same is formed with an axial semi-circular socket 12.

My improved form of locking device comprises a bar 13 having lateral wings 14—14 adapted to pass through the slots 6—6 and to engage with the walls of the thread forming grooves 7—7, whereby on rotating the bar, same will move axially of the aforesaid branch E of the coupling D. The central inner face of the bar 13 is formed with a convexity or semi-circular boss 15 adapted to fit in the socket 12 and to press axially against the walls thereof so as to force the valve disk into sealed engagement with its seat 8 and thereby effect a seal when the bar 13 is turned in a locking direction. Said bar 13 carries wings 16 which may receive the force or blow of a suitable tool when the bar is manipulated. The valve disk is also provided with similar wings or integral lugs 17.

A circular wall plate 18 is employed and same is adapted to cover the opening F, as shown in Figure 3. Its flared marginal edge 19 is adapted to be drawn against the face of the wall and for this purpose and in order that the plate may be detachably secured in position, I employ a screw 20 which enters a threaded opening 21 in the center of the bar 13.

It now follows in consequence of the foregoing, that the few parts herein constituting my invention, and which are embodied in a novel form of T-coupling or unit, are practical for the purpose set forth, simple of construction, strong and durable and highly effective in forming a sealed opening in the soil pipe which can be covered and sealed as desired, or opened as desired, so that access can be had thereto. A gas-tight joint is formed between the co-acting parts when the valve disk is fully adjusted against its seal. The parts employed are few in number and may be adjusted to intended positions

with maximum dispatch and accuracy. They are so correlated that in assembling same for use, they are readily accessible and may be grasped and manipulated with ease and convenience. It is also desired to state that the structure consists chiefly of three parts, namely, the coupling body D; the valve disk 13 and the locking bar 13. I refer to the latter as one part, because it is normally associated with plate 18 and its connecting screw 20.

What I claim is:

A soil pipe clean-out comprising a T-shaped coupling having a short horizontal branch adapted to extend into the opening of a wall so that its outer end comes substantially flush with the outer surface of the wall, the said horizontal branch having an annular flared seat, a valve disk adapted to close against said seat, a locking device engageable with the axial center of the disk and provided with an integral locking bar whose ends are diametrically positioned with respect to the inner wall of said horizontal branch, means on said inner wall coacting with said ends of the bar to cause the locking device to move axially of the branch and thereby apply pressure against the valve disk so as to seal the disk against its seat, and wings on the bar positioned with respect to the outer open end of the horizontal branch to permit the wings to be struck by a tool when said tool is manipulated from the outer end of said branch while the branch is disposed substantially flush with the outer wall in which the coupling is mounted.

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