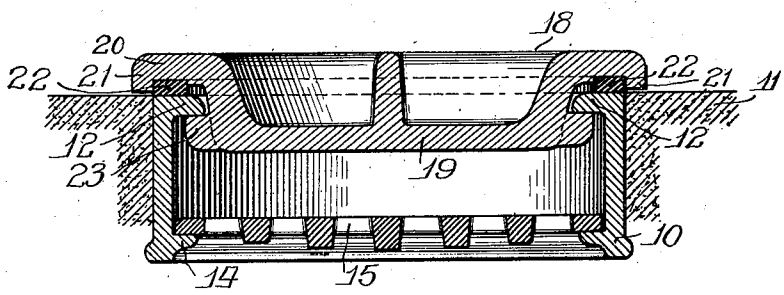
W. F. J. LUTZ.

DRAIN FITTING.

APPLICATION FILED JAN. 16, 1918.

1,375,222. **Patented Apr. 19, 1921.**

Fig. 1



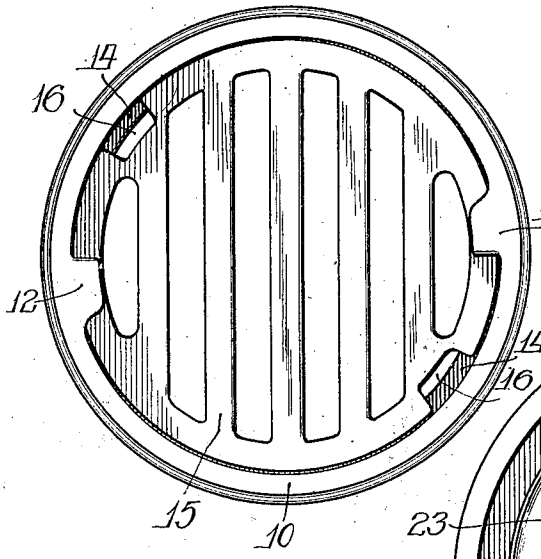


Fig. 2

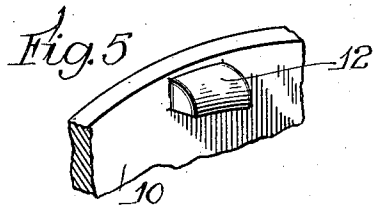


Fig. 5

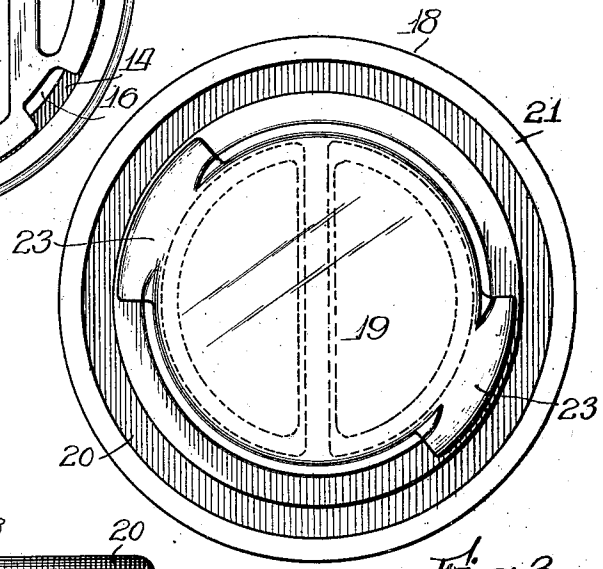


Fig. 3

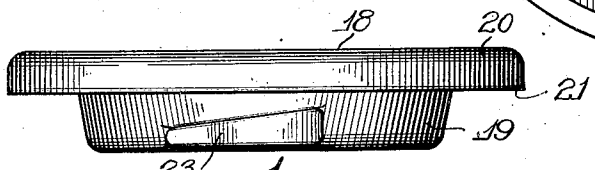


Fig. 4

Witness.
Chas. R. Kourse.

Inventor.
William F. J. Lutz.
By: William W. Hall. Atty.

UNITED STATES PATENT OFFICE.

WILLIAM F. J. LUTZ, OF CHICAGO, ILLINOIS.

DRAIN-FITTING.

1,375,222. Specification of Letters Patent. Patented Apr. 19, 1921.

Application filed January 16, 1918. Serial No. 212,047.

To all whom it may concern:

Be it known that I, WILLIAM F. J. LUTZ, a citizen of the United States, and a resident of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Drain-Fittings; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the characters of reference marked thereon, which form a part of this specification.

This invention relates to a novel drain fitting and back-water cap and also to a novel closure for floor drains, clean-out fittings and traps of all kinds, and the invention consists in the combination and arrangement of the parts shown in the drawings and described in the specification, and is pointed out in the appended claim.

The purpose of the invention as applied to floor drains is to produce an exceedingly simple and effective drain device through which water may be directed to an underneath drain pipe; to provide a novel means of assembling a screen in such drain fittings, and to provide a simple and economical means of attaching the cap or closure to the fitting in such manner as to prevent leakage, due to back-water pressure between the fitting and cap, and further so constructed and arranged as to reliably clamp the closure or cap of the fitting by means which permits the cap to be readily detached from the fitting. In respect to the cap or closure the purpose of the invention is to provide a novel interlocking connection between the cap and the mouth of the fitting which it closes such as to tightly clamp the cap in place, while avoiding the necessity of employing screw threads and thereby avoiding the liability of the cap sticking, as when screw threads are employed.

In the drawings,

Figure 1 is an axial vertical section of the fitting and a portion of the floor.

Fig. 2 is a plan view with cap removed.

Fig. 3 is a bottom view of the cap.

Fig. 4 is an edge elevation of the cap.

Fig. 5 is a detail inner elevation of the fitting cam lug.

My invention is herein shown as applied to a floor drain fitting, and in the following description will be pointed out specifically with respect to this embodiment; but it will be understood that the structure, especially as to the closure or cap, may be otherwise employed for closing openings against the leakage of water or gas.

As shown in the drawings, 10 designates the ring-like body of the fitting, usually made of cast iron. Said fitting is adapted to fit closely within an opening in the floor 11 prepared to receive the same, and in practice the fitting is so applied to the floor that its upper edge is flush with the upper face of the floor. The fitting is provided internally with a number of inwardly directed short lugs 12, two diametrically opposed lugs being herein shown, made integral with the wall of the fitting. Said lugs are located with their lower edges a distance below the upper edge of the fitting ring. The fitting is provided near its lower edge with an internal flange or shoulder 14 which may comprise a continuous annular shoulder member or a number of spaced lugs.

Contained within the fitting ring is a screen or grid 15 which normally is supported on the shoulder 14. Said screen or grid is made of such mesh to prevent the discharge through the drain fitting of articles of substantial dimensions. The screen or grid, which may also be made of cast metal, is loosely supported on the flange or shoulder 14. It is provided at its edges with opposing notches 16 which are made of sufficient depth as to permit the lugs 12 of the fitting ring to pass therethrough when the screen is lowered into the fitting. When so lowered the screen is angularly turned so as to bring said notches 16 out of line with the lugs so that the grid or screen cannot be forced by back-water pressure out of the fitting when the cap is removed. By turning the screen to bring the notches 16 in line with said lugs, however, said screen may be readily removed from the fitting. When so removed free access may be had to the drain pipe 17 below the fitting, into which the fitting discharges, for the purpose of cleaning the same. The drain fitting is closed at its top by a cap 18 which also is preferably made of cast metal. The said cap is provided with an axial downward extension 19 of relatively large diameter which fits centrally within the fitting, and the rim 20 of the cap extends radially beyond said extension to bear upon the upper edge of said fitting. The cap is provided beyond its bearing face with an annular downwardly extending lip 21 which surrounds the upper

edge of the fitting ring. Preferably there will be interposed between said rim 20 and the upper edge of the fitting ring a suitable packing medium 22 to afford a water and gas tight joint between the cover and fitting ring. This packing medium is resilient and will be so compounded as to maintain its resiliency in all temperatures to which the fitting is exposed and also of such character as to avoid softening of the packing medium under temperatures higher than normal.

The said extention 19 is provided with diametrically opposed, generally horizontal projections 23, each made of a length considerably greater than the width of the lugs 12 of the fitting ring. The lugs 12 and said projections 23 are so shaped as to interact to clamp in place the cap or cover. To this end the lower faces of the lugs 12 are inclined or cam shaped, while the upper faces of the projections 23 of the extension 19 are in a like manner inclined or cammed. The relation of said lugs 12 and the projections 23 are such that when the cap is fitted on the fitting ring the lower ends of the cam faces of the projections 23 are below the inclined or cam faces of the lugs 12. The said cap is, of course, placed upon the fitting with the projections 23 out of line with the lugs 12 and when, therefore, the cap is angularly turned the cam faces of the lugs and projections are brought together and interact as the cover is turned to draw or clamp said cover tightly down on the upper edge of the fitting ring, or against the packing medium 22, if the latter be employed.

The upper face of the cap or cover may be fashioned in any suitable manner for engagement by a wrench or implement by which to turn the cap out of locking engagement with the fitting rim, as for instance, said cap may have for this purpose a cross rib or a polygonal engaging member. In any event the engaging member will preferably be sunken below the level of the top face of the cap so as to present no obstruction above said level.

I claim as my invention:

A drain fitting comprising a ring open at both ends and adapted to fit at its top end substantially flush with the floor, in an opening in which the ring is seated, said ring being provided interiorly at the top of its open end with lugs, a cap to cover said fitting and having a peripheral hooked flange to compress and confine a gasket at the floor level between the flange and the top of the ring, and provided with a downward extension having projections adapted for cam face contact with said lugs to compress the gasket and to lock the cap on the ring when the cap is rotated, said ring being provided at its bottom with an internal screen support and a screen supported thereon and having peripheral notches to pass over said top interior lugs, whereby the screen may by rotation be removed from and locked within the ring.

In testimony whereof I affix my signature in the presence of two witnesses this tenth day of January, 1918.

WILLIAM F. J. LUTZ.

Witnesses:
W. L. HALL,
MARGARET D. ROBB.