No. 835,852. PATENTED NOV. 13, 1906.

J. P. FARLEY.

DRY PAN FLOOR DRAIN.

APPLICATION FILED JUNE 17, 1905.

Fig. 1.

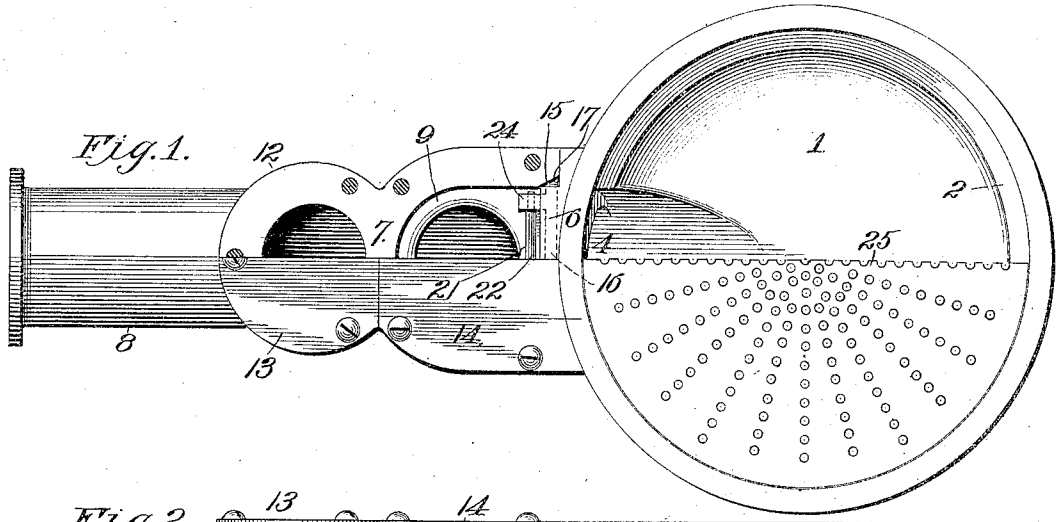



Fig. 2.

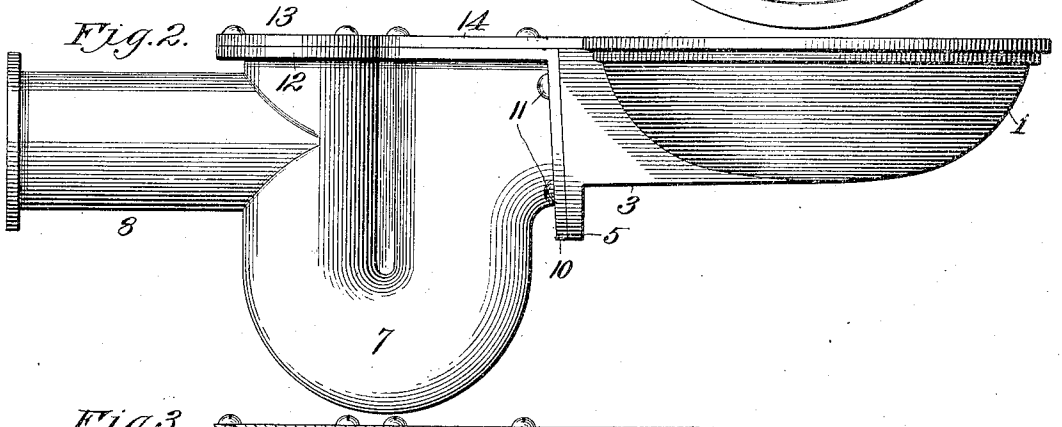



Fig. 3.

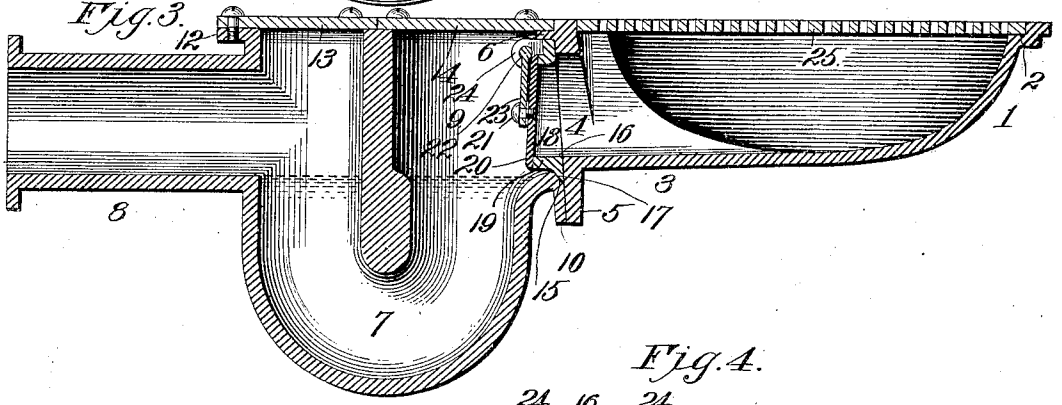
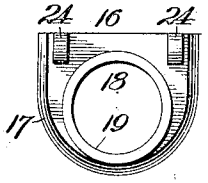



Fig. 4.




Witnesses:

H. C. Rodgers.

Fred V. Griffith

Inventor:

John P. Farley

By George H. Thorpe

Atty

# UNITED STATES PATENT OFFICE.

JOHN P. FARLEY, OF KANSAS CITY, MISSOURI, ASSIGNOR OF ONE-HALF TO ADOLPH A. PRIER, OF KANSAS CITY, MISSOURI.

## DRY-PAN FLOOR-DRAIN.

No. 835,852. Specification of Letters Patent. Patented Nov. 13, 1906.

Application filed June 17, 1905. Serial No. 265,654.

*To all whom it may concern:*

Be it known that I, JOHN P. FARLEY, a citizen of the United States, residing at Kansas City, in the county of Jackson and State of Missouri, have invented certain new and useful Improvements in Dry-Pan Floor-Drains, of which the following is a specification.

This invention relates to dry-pan floor-drains for use particularly in cellars, and has for its object to produce an article of this character which not only guards against back-flow of water into the pan and cellar and prevents noxious gases from the sewer entering the cellar, but also permits the plumbing to be tested before the plumbing-work is completely installed, and thereby facilitates the plumbing-work and reduces its cost to some extent.

To this end the invention consists in certain novel and peculiar features of construction and organization, as hereinafter described and claimed, and in order that it may be fully understood reference is to be had to the accompanying drawings, in which—

Figure 1 is a top plan view of the drain with one-half of each cover-plate removed. Fig. 2 is a side elevation with the cover-plates in position. Fig. 3 is a central vertical longitudinal section, and Fig. 4 is a detail face view of the gate-carrying plate.

In the said drawings, 1 indicates a comparatively shallow pan of circular or other configuration flanged at its upper edge to provide a horizontal shoulder 2. The pan is provided with a radial projection 3, having a radial passage 4, with its bottom by preference sloping slightly downward from the bottom of the pan, so that water will not stand in the latter. At its outer margin the projection is provided with a depending flange 5 and at its upper margin with a transverse rearwardly-projecting flange 6, which terminates short of the sides of the projection.

A substantially U-shaped trap 7 has its outermost leg communicating with the tubular stem 8, adapted to be coupled or secured in any suitable or preferred manner to the drain-pipe, (not shown,) and the upper end of its other leg communicating with a passage 9 in line with passage 4. That portion of the trap forming the passage 9 fits against the outer face of the projection 3 at opposite sides of flange 6 and is provided with an outwardly-projecting flange 10, secured by cap-screws 11 or equivalent devices to the end of said projection and its depending flange, it being noticed in this connection that the bottom of passage 9 continues the downward and outwardly inclination of passage 4.

At its upper margin the trap is provided with an outwardly-projecting flange 12, which in practice forms a continuation of flange 10, and closing the upper end of the outermost leg of the trap is a removable cap 13, a similar cover 14 closing the upper side of passage 9, which opens downwardly into the inner leg of the trap. The inner edge of that portion of the trap forming passage 9 is beveled, as at 15, so as to receive the beveled outer edge 17 and reliably clamp in position a U-shaped plate 16, fitting flatly against the outer face of the projection of the pan and against the under side of flange 6 of said projection. This plate is provided with a passage 18, registering with passage 4, the plate being formed with a circular flange 19, surrounding said passage and projecting into passage 9, and having its rear edge pitched downwardly and outwardly at a slight angle by preference and forming a seat for the gate 20, screw-bolted, as at 21, to the depending arm 23 of a transverse rod 22, pivoted in the outwardly-projecting ears 24 of the plate. It will be understood, of course, that the various joints between the trap and the drain-pan projection and between the latter and the gate-carrying plate and likewise between the trap and the covers thereof may be suitably packed to guard against leakage, it being understood that a suitable foraminous drain-plate 25 rests upon the shoulder 2 and bridges the drain-pan for the purpose of preventing matches and other foreign particles entering the drain and interfering with its proper operation.

In practice the water entering the drain-pan will pass off through passages 4 and 18 and 9 into the trap until the latter becomes charged to the depth indicated in Fig. 3. If the quantity of water exceeds the capacity of the lower portion of the trap, the surplus will flow off from the latter through stem and the drain-pipe, passing thence to the sewer in the usual manner. Each subsequent charge of water to the drain-pan will likewise force an equivalent amount of water

through the trap to the sewer, the trap always standing after each of these flushing operations charged with water to the depth hereinbefore referred to, it being obvious that all of the water is drawn from the pan to avoid possibility of water becoming stagnant therein. In each of the following operations described it is obvious that the gate opens to the pressure of the water and recloses as soon as the flow from the pan ceases, so that it will be in position to prevent any sudden rise of water in the trap due to backflow from sewer or other cause forcing water back into the drain-pan. It will also be understood because of the seal which the water in the trap provides that noxious gases rising from the sewer can not pass through the drain-pan to the cellar and that the gravity-gate coöperates with the seal in excluding such gases from the cellar.

When it is desired to test the plumbing preliminarily—that is, before such plumbing has been completely installed—one of the covers 13 and 14 is removed and a testing-plug (not shown) is forced into the exposed trap-leg, so as to make a water-tight joint therewith, the testing-plug being attached to another part of the plumbing by means of the usual flexible hose. (Not shown). By this arrangement it will be seen that the plumbing can be tested and the water flow off to the sewer without escaping into the cellar by way of the drain-pan or through the upper end of the leg of the trap engaged by the testing-plug, this being so because the upper end of the other leg of the trap is provided with a separate cover. After the test has been made the plug is removed and the cover resecured in position.

In case the trap becomes obstructed from the accumulation therein of any foreign particles or matter access to such obstruction can be easily and quickly obtained by removing the covers of the trap.

From the above description it will be apparent that I have produced a dry-pan floor-drain possessing the features of advantage enumerated as desirable in the statement of the object of the invention.

Having thus described the invention, what I claim as new, and desire to secure by Letters Patent, is—

The combination of the pan having a tubular radial projection provided at its end with a depending flange and with an upper transverse outwardly-projecting flange, a trap fitting against the tubular projection of the pan at opposite sides of the upper transverse outwardly-projecting flange of the same and having a depending flange fitting against the depending flange of said tubular projection, a U-shaped plate clamped by and between the depending flanges of the trap and the tubular projection of the pan and fitting against the under side of the upper transverse flange of said tubular projection, and an outwardly-opening valve-gate hinged to the upper portion of said U-shaped plate.

In testimony whereof I affix my signature in the presence of two witnesses.

JOHN P. FARLEY.

Witnesses:

L. M. BEECH,

W. CLARKE.