

G. L. ROLLINS.
 SANITARY DRAIN.
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1,363,535.

Patented Dec. 28, 1920.

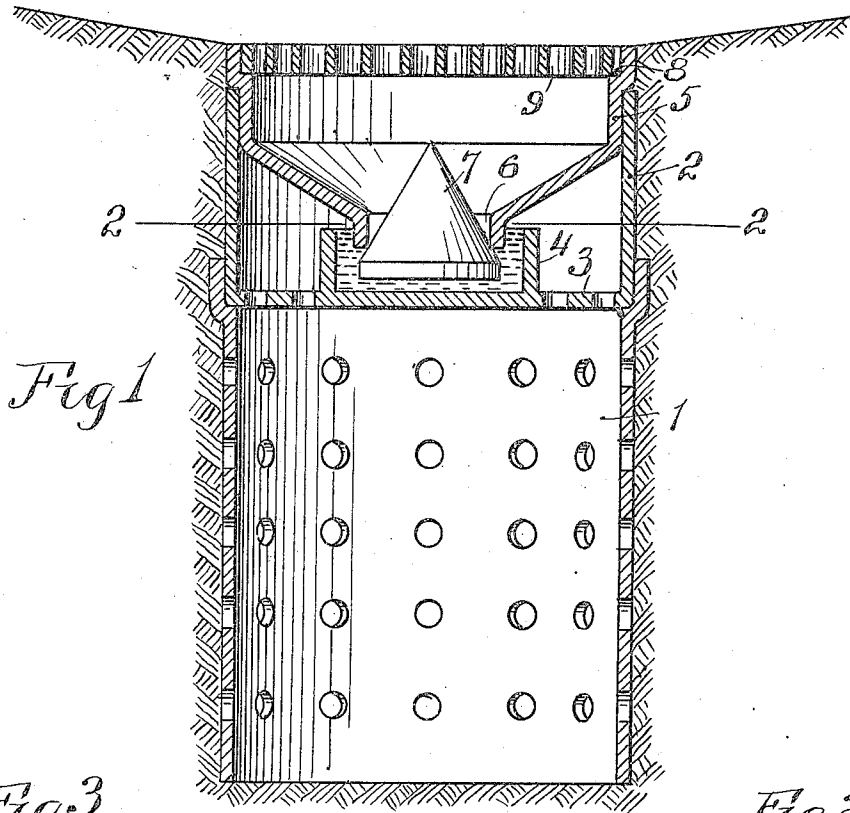
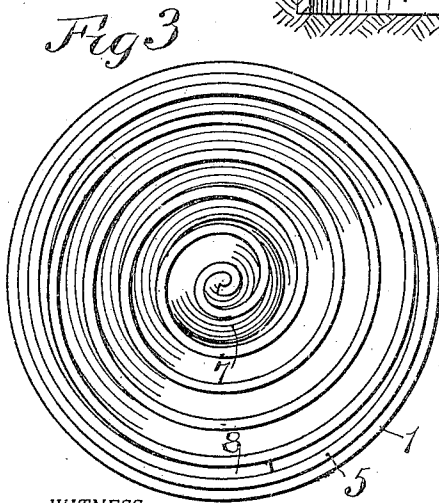


Fig 1



WITNESS:

R. Hamilton

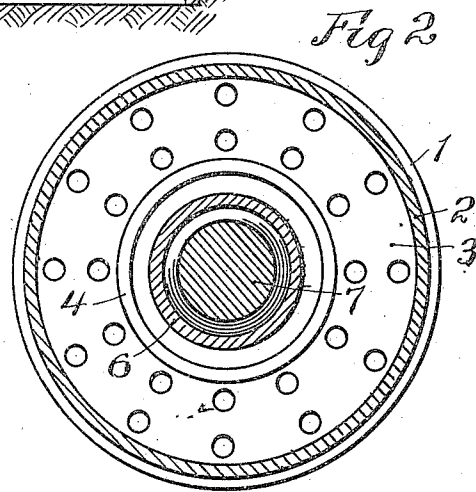


Fig 2

INVENTOR.

George L. Rollins

BY

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UNITED STATES PATENT OFFICE.

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SANITARY DRAIN.

1,363,535.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, GEORGE L. ROLLINS, a citizen of the United States, residing at Kansas City, in the county of Jackson and State of Missouri, have invented a certain new and useful Improvement in Sanitary Drains, of which the following is a specification.

My invention relates to improvements in sanitary drains.

It relates particularly to a drain adapted for use in irrigating.

The object of my invention is to provide a simple, sanitary and effective drain, which is cheap to make and to install, which is durable and not liable to get out of order, which can be readily cleaned, which will afford a quick diffusion of the water which enters it, and which will prevent the escape to the atmosphere of offensive odors.

The novel features of my invention are hereinafter fully described and claimed.

In the accompanying drawing which illustrates the preferred embodiment of my invention,

Figure 1 is a central vertical sectional view of my improved drain shown in operative position in the ground.

Fig. 2 is a horizontal section on the line 2—2 of Fig. 1.

Fig. 3 is a top view of the drain.

Similar reference characters designate similar parts in the different views.

1 designates an upright perforated pipe adapted to be mounted in a hole in the ground and, preferably, having in its upper end an annular recess in which is fitted the lower end of a tubular member 2, which is provided with a perforate bottom 3 on which is a cup 4.

Fitted in the upper end of and supported by the tubular member 2 is a receiving bowl 5 having a contracted open lower end 6 which extends into the cup 4 below and spaced apart from the upper edge of the latter. The cup 4 has mounted in it a float valve 7, provided, preferably, with a conical upper end which extends into and is adapted to close the lower open end of the bowl 5. The upper end of the bowl 5 is provided with an annular recess 8 in which is fitted the periphery of a horizontal strainer 9 preferably of convolute or helical form. The upper edge of the bowl 5 is flush with the ground as may be the upper side of the strainer 9. The convolute form of the latter

imparts a whirling movement to the water passing through the drain, thus assisting in preventing clogging with dirt or mud. The convolute form of the strainer 9 also permits it being made from a bar of some resiliency, which will yield under heavy pressure and will not be liable to break.

When the water enters the cup 4 from the bowl 5, the valve 7 will be lifted so as to close the open lower end of the bowl 5. The incoming water will force the float valve downwardly to permit the passage of the water, but as soon as the flow into the bowl stops the valve will close, thereby preventing noxious odors from escaping to the atmosphere. The water passing over the upper edge of the cup 4 will pass through the perforate bottom 3 and will enter the pipe 1 from which the water will pass by the side perforations and the open lower end of the pipe 1.

The drain may be set in the earth in a place which it is desired to irrigate, and water, which, otherwise, would flow away and be lost, will be caught and utilized for irrigation.

When it is desired to use the device as simply a sanitary trap for a sewer, the perforations in the side of the pipe 1 may, of course, be dispensed with, and the lower end of the pipe 1 arranged to discharge into the sewer, instead of directly into the earth.

I do not limit my invention to the structure shown and described, as many modifications, within the scope of the appended claims, may be made without departing from the spirit of my invention.

What I claim is:—

1. In a sanitary drain, upright piping, a cup arranged to discharge over its upper edge into said piping, a receiving bowl adapted to have its upper edge flush with the surface of the ground and having an open lower end extending into the cup below the upper edge of the latter, and a float valve arranged to be supported by water in the cup and to be lifted by the water to a position closing the lower end of the receiving bowl, substantially as set forth.

2. In a sanitary drain, upright piping, a cup arranged to discharge over its upper edge into the piping, a receiving bowl having an open lower end extending into the cup below the upper edge of the latter, and a float valve in said cup having a conical upper end adapted to enter and close the

open lower end of the bowl, substantially as set forth.

3. In a sanitary drain, an upright water diffusing pipe, a tubular member fitted in the upper end of said pipe and having a perforate bottom and a cup supported by the perforated bottom, a receiving bowl having an open lower end extending into said cup below the upper edge of the latter, and a float valve in said cup arranged to close said open lower end of the bowl, substantially as set forth.

4. In a sanitary drain, an upright piping, a cup supported in said piping, a receiving bowl having an open lower end discharging into said cup, and a valve float in said cup arranged to close said lower end, substantially as set forth.

5. In a sanitary drain, a perforated upright pipe, a tubular member fitted in said pipe having a perforate bottom and a cup supported by said bottom, a receiving bowl fitted in and supported by the tubular member and having an open lower end extending into said cup below the upper edge of

the latter, and a float valve in said cup arranged to close the open lower end of said receiving bowl, substantially as set forth.

6. In a sanitary drain, a receiving bowl open at its lower end and having in its upper end an annular recess, and a helical strainer fitted in said recess and extending across said bowl, substantially as set forth.

7. In a sanitary drain, an upright perforated diffusing pipe having in its upper end an annular recess, an upright tubular member fitted in said annular recess and having a perforate bottom and a cup supported on said bottom, a receiving bowl having an open lower end extending into said cup and being fitted in and supported by said tubular member and having in its upper end an annular recess, a float valve in said cup adapted to close the lower open end of the bowl, and a strainer fitted in the annular recess of the bowl and extending across the latter, substantially as set forth.

In testimony whereof I have signed my name to this specification.

GEORGE L. ROLLINS.