

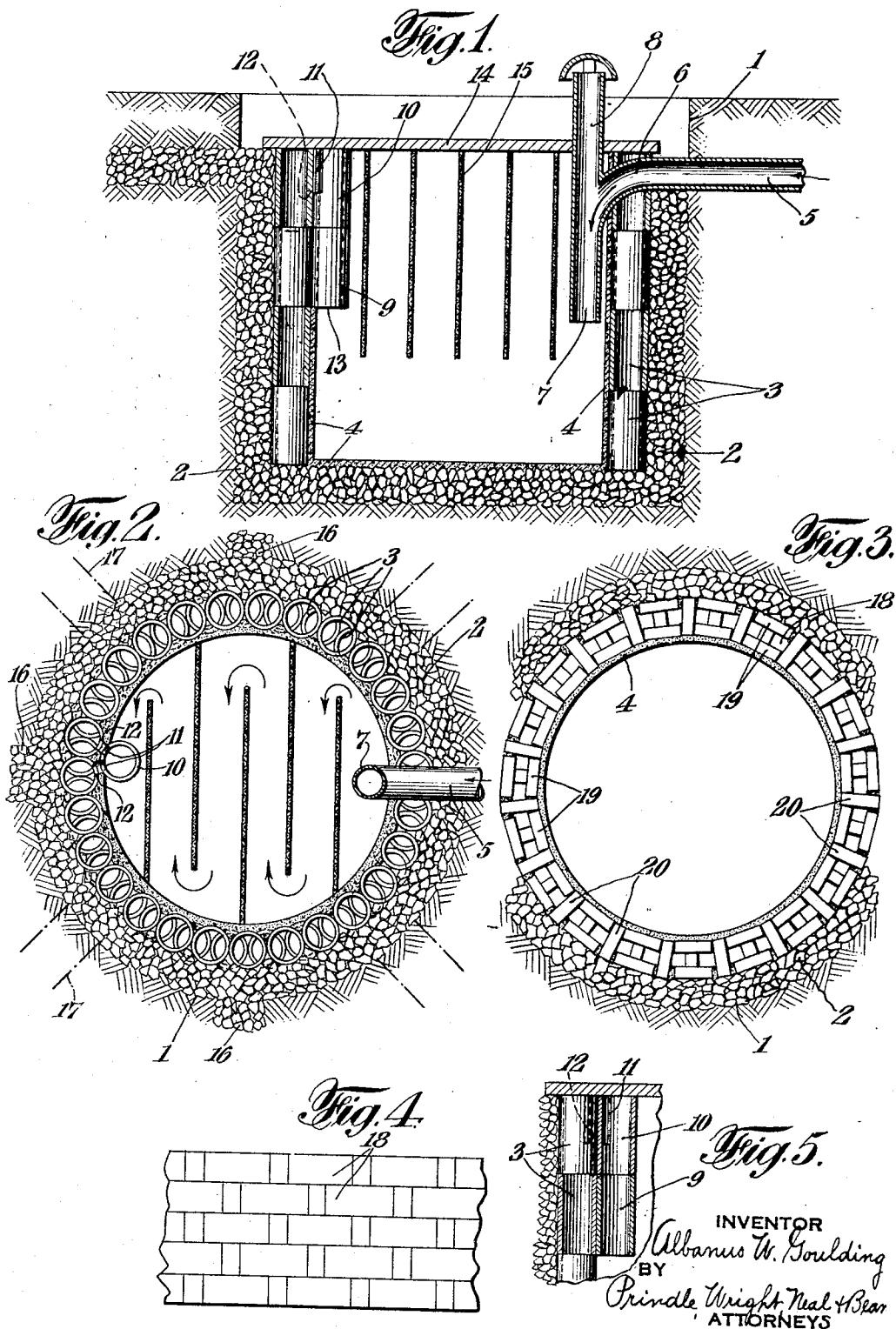
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SEPTIC TANK

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UNITED STATES PATENT OFFICE

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SEPTIC TANK

Application filed December 19, 1928. Serial No. 326,956.

This invention relates to improvements in septic tanks, and the principal object thereof is the provision of such a tank which may be constructed and built of standard materials of which a supply is available anywhere.

A further object of this invention is the provision of such a device which is simple in construction and may be readily erected without the necessity of using highly skilled labor, and which is efficient in operation and of long life, and the capacity of which may readily be increased.

Other objects of the invention include improvements in detail of construction and arrangement of parts as hereinafter set forth.

To the accomplishment of the foregoing, and such other objects as may hereinafter appear, this invention consists in the construction, combination and arrangement of parts hereinafter described and sought to be defined in the appended claims, reference being had to the accompanying drawings which show embodiments of this invention merely for the purpose of illustrative disclosure, it being expressly understood, however, that various changes may be made in practice within the scope of the claims, without departing from my inventive idea.

In the drawings,

Fig. 1 represents a vertical cross-section of one form of tank constructed to embody my invention;

Fig. 2 represents a transverse cross-section of the construction shown in Fig. 1;

Fig. 3 is a top plan view of another form of wall construction; and

Fig. 4 is a side elevation of part of the wall construction shown in Fig. 3.

Fig. 5 is a detailed vertical cross-section through the discharge conduit.

Referring now to the drawings, 1 designates a suitable excavation which is made at the site of the tank. This may be of any desired size in accordance with requirements of use.

The floor of the excavation is laid with coarse gravel to the desired thickness, as indicated at 2, or hollow tile or the like may be used. The tank is built directly upon this floor 2, and in the preferred form includes a plurality of rows or tiers of hollow tile 3, standing on end. Each row or tier of the hollow tile 3 is positioned on top of the next adjacent row or tier, and in staggered or broken joint relation thereto, as clearly shown in Fig. 2 of the drawing. These rows of hollow tile are shown arranged in the form of a circle in the drawing, but it is to be understood that they may be arranged in various other forms. This side wall is built to the desired height, as many rows or tiers of tile being used as necessary for this purpose. The space between the side wall and the side of the excavation is filled with a suitable quantity of gravel, cinders or other suitable fluid-pervious material.

The inside of the wall and the bottom of the tank are cemented or plastered so as to be water-tight, as indicated at 4.

The inlet is designated 5, leading to a T 6 having the downwardly directed discharge end 7 and the upwardly extending vent 8. The discharge from the tank is provided by the construction shown to the left in Fig. 1, and in detail in Fig. 5, and includes the pair of hollow tile members 9 and 10 mounted one on top of the other, the tile member 9 being cemented or plastered to the inside of the wall of the tank, as indicated in Fig. 2. The tile member 10 fits between two tile members of the wall 3 of the tank, and has the opening 11 formed therethrough which communicates with the openings 12 formed in the tile members at or about the point of contact. It is to be noted that the lower end 13 of the discharge conduit formed by the pair of tiles 9 and 10 is slightly above the lower end of the inlet member 7 so that the latter is sealed at all times.

A suitable lid or cover 14 is provided, and

also a plurality of baffle members 15 which are preferably formed of copper wire netting and are arranged as indicated in Fig. 2 so as to assist in the separation of the material within the tank.

Extending outwardly from the excavation 1 are trenches 16 which may be filled with gravel, cinder, ashes and the like for drainage purposes; and additional trenches radiating therefrom, as indicated at 17, may be provided or made at any time whenever necessary.

The construction designated 5, 6, 7 and 8 not only forms an inlet, but also provides a tell-tale vent whereby a measuring rod, stick or the like, the depth of the liquid in and the condition of the tank may be readily ascertained.

As an alternative form, and instead of using hollow tiles, shown in Figs. 1 and 2, I may use the ordinary bricks built in the form of an "ideal" wall, as illustrated in Figs. 3 and 4. The bricks 18 are arranged in rows or tiers staggered, each row or tier consisting in alternation of a pair of bricks arranged longitudinally side by side as at 19, and an end brick 20 extending transversely thereacross, the bricks all standing on edge. The bricks in the next adjacent tier or row are staggered with respect to the previous tier or row, whereby an open brick wall is constructed. The rest of the construction will be substantially the same.

The operation of the device is simple and obvious from a consideration of this specification and the drawings. The material passes into the tank from the inlet connection 5, the solid matter settling to the bottom and the liquid passing through the discharge conduit 9, 10, out through the openings 11, 12, and thence through the joints into the gravel surrounding the tank and the trench or trenches radiating therefrom.

Where the tank is deeper than that shown in Fig. 1 of the drawings, the tiles 9 and 10 forming the discharge conduit, will be located at a point removed from the top of the tank, as will be the openings or apertures 11, 12. In this instance, the lower end of the inlet 7 will also be located at a lower point, this always being at a slightly lower level than the lower end of the discharge conduit 9, 10.

It is obvious, therefore, that I have provided a septic tank which may be made and constructed entirely of standard supplies, including hollow tiles or bricks, cement, plaster and the like available at any place, and that due to the simplicity of the construction, skilled labor is not necessary for erection. An important feature is the broken joint construction of the side wall of the tank, which accomplishes better distribution of the discharged fluid outside the tank.

What I claim is:

1. A septic tank, including in combination, a side wall of open construction made fluid tight on the inside thereof, an inlet leading through one side of said wall and having the end thereof located a substantial distance from the top of said tank, and a vent and tell-tale connection extending upwardly from said inlet, a discharge conduit secured to the other side of said tank and having the inlet end thereof located in a plane above the plane of the discharge end of the inlet connection, said discharge conduit having communication near the upper end thereof with the interior of said open side wall, a lid or cover for said tank, and a plurality of staggered baffle screens located in the upper portion of said tank, the lower edges of which terminate below the lower ends of said inlet and discharge connections.

2. A septic tank construction, including in combination, a base or foundation, a side wall construction open through its interior but having its inner face made fluid-tight, a fluid pervious bed surrounding said side wall, an inlet connection passing through said side wall and having its discharge end positioned a substantial distance below the top of the side wall, a discharge conduit provided within said tank on the side opposite said inlet connection, said discharge conduit including a pair of hollow tile members, one positioned on top of the other, the uppermost of said tile members having an opening communicating with said hollow wall and the lower end of said discharge conduit being located on a plane above the lower end of said inlet.

3. A septic tank construction, including in combination, a base or foundation, a side wall construction open through its interior but having its inner face made fluid-tight, a fluid pervious bed surrounding said side wall, an inlet connection passing through said side wall and having its discharge end positioned a substantial distance below the top of the side wall, a discharge conduit provided within said tank on the side opposite said inlet connection, said discharge conduit including a pair of hollow tile members, one positioned on top of the other, the uppermost of said tile members having an opening communicating with said hollow wall and the lower end of said discharge conduit being located on a plane above the lower end of said inlet, said inlet connection being provided with a combined vent and tell-tale connection leading through the top of the tank.

4. A septic tank, including in combination a bed of fluid pervious material positioned in an excavation of suitable size and shape, a side wall positioned against said bed, said side wall being formed of a plurality of rows or tiers of hollow tile standing on end, and the tiles in each row or tier being arranged in staggered relation with respect to the tiles of the next adjacent row or tier, the bottom

of the tank and the inner surface of said side wall being cemented so as to be fluid-tight, an inlet at one side of said tank passing through said side wall and having its discharge end located at a distance below the top of said tank, a discharge conduit within said tank located opposite said inlet, said discharge conduit including a plurality of hollow tiles arranged in end-to-end relation, the upper tile having communication with the interior of the hollow side wall, and a trench filled with fluid pervious material radiating from said excavation.

5. A septic tank, including in combination a fluid-tight bottom, a side wall composed of a plurality of rows or tiers of hollow tiles arranged in end-to-end relation with the tiles of each row or tier arranged in broken joint relation to the tiles of the next adjacent row or tier, a fluid-tight surface provided on the inside of said side wall, an inlet extending through said side wall having its discharge end located a substantial distance from the top of the tank, a discharge conduit having a discharge opening near its top communicating with the interior of said side wall and having its open-receiving end located in a plane above the plane of the discharge end of said inlet.
6. A septic tank, including in combination a fluid-tight bottom, a side wall composed of a plurality of rows or tiers of hollow tiles arranged in end-to-end relation with the tiles of each row or tier arranged in broken joint relation to the tiles of the next adjacent row or tier, a fluid-tight surface provided on the inside of said wall, an inlet extending through said side wall having its discharge end located a substantial distance from the top of the tank, a discharge conduit having a discharge opening near its top communicating with the interior of said side wall and having its open-receiving end located in a plane above the plane of the discharge end of said inlet, said tank being provided with a tell-tale vent and a plurality of staggered screen baffles in the upper portion thereof.
7. A septic tank, including in combination, a side wall of open construction made fluid tight on the inside thereof, and having an impervious bottom, an inlet leading through one side of said wall and having the end thereof located a substantial distance from the top of said tank, a discharge conduit secured to the other side of said tank and having the inlet end thereof located in a plane above the plane of the discharge end of the inlet connection, said discharge conduit having communication near the upper end thereof with the interior of said open side wall.
8. A septic tank, including in combination, a fluid impervious container having a bottom and sides, a plurality of rows of hollow tile placed in end to end relation and surrounding the sides of said container, a bed of loose gravel surrounding the outer wall of said tile, an inlet extending through said wall of the container having its discharge end located a substantial distance from the top of the tank, a discharge conduit having a discharge opening near its top communicating with the interior of the container and located in a plane above the plane of the end of said inlet.

In testimony that I claim the foregoing, I have hereunto set my hand this 30th day of November, 1928.

ALBANUS W. GOULDING.