W. A. McKNIGHT.

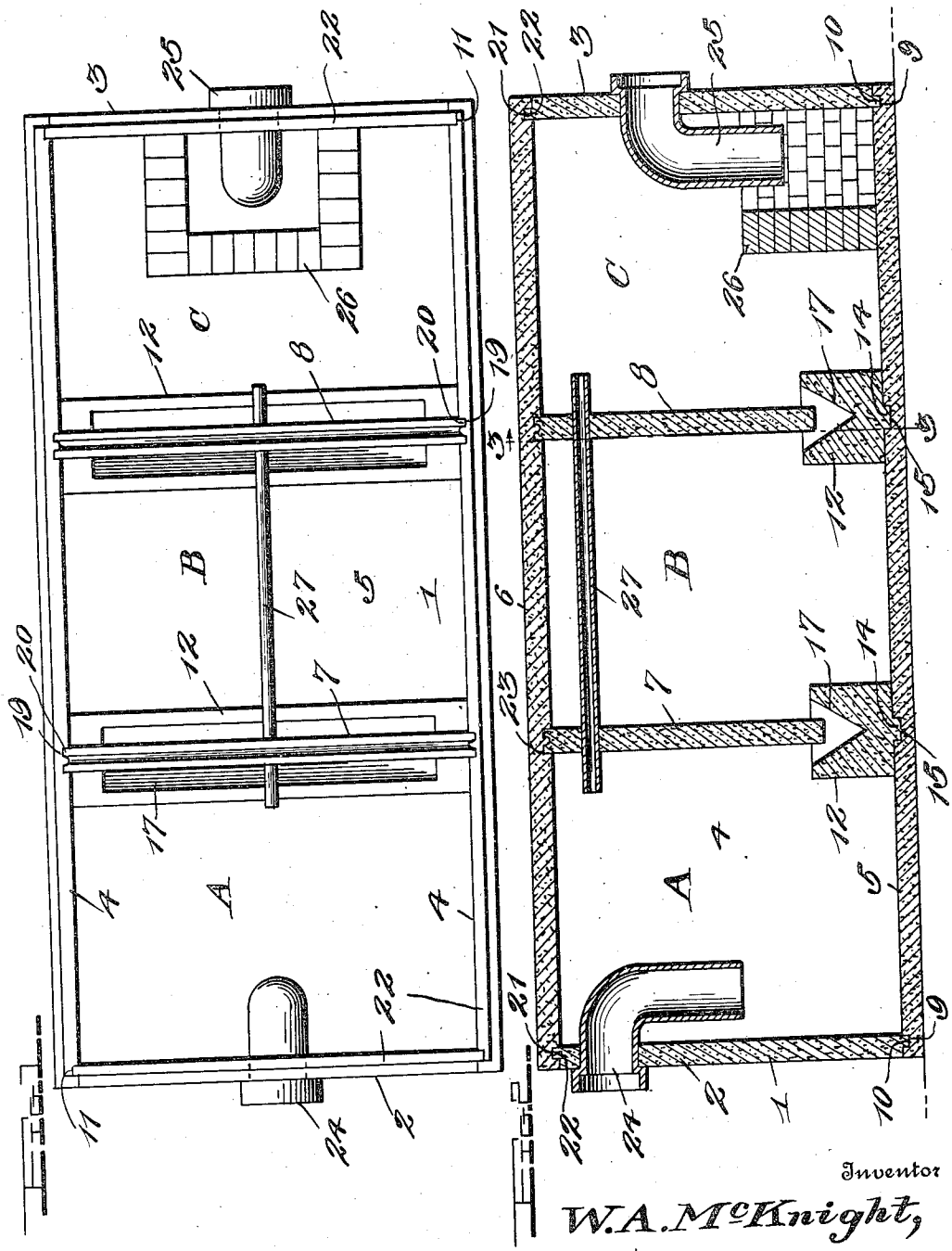
SEPTIC TANK.

APPLICATION FILED AUG. 3, 1912.

Patented Dec. 3, 1912.

1,046,097.

2 SHEETS—SHEET 1.



Inventor

W. A. McKnight,

Witnesses

Chas. L. Griesbauer.

Frank B. Hoffman

By Watson E. Coleman

Attorney

W. A. McKNIGHT.

SEPTIC TANK.

APPLICATION FILED AUG. 3, 1912.

1,046,097.

Patented Dec. 3, 1912

2 SHEETS—SHEET 2.

Fig. 3.

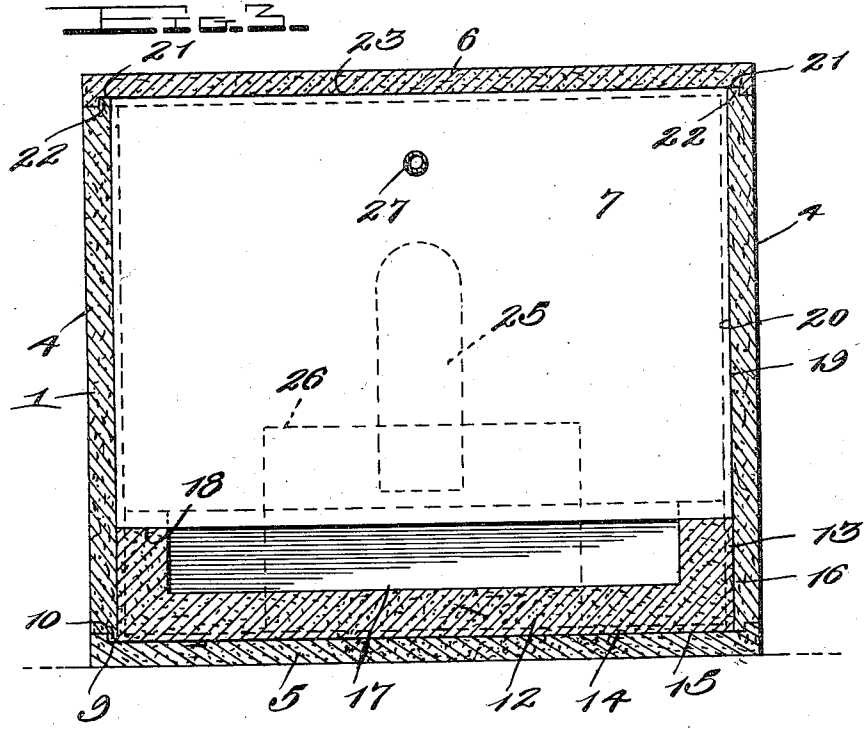
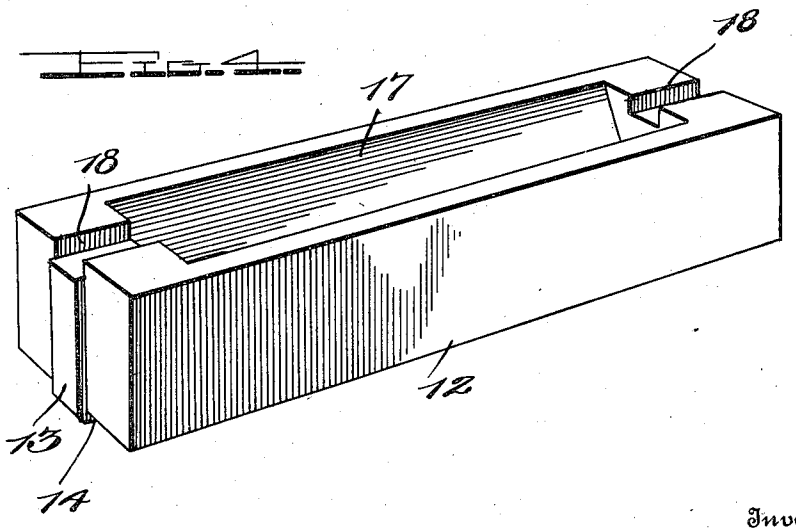


Fig. 4.



Inventor

W. A. McKnight,

Witnesses

Chas. L. Griesbauer.

Frank B. Hoffman

By Watson E. Coleman.

Attorney

UNITED STATES PATENT OFFICE.

WILLIAM A. McKNIGHT, OF ALEXIS, ILLINOIS.

SEPTIC TANK.

1,046,097. Specification of Letters Patent. Patented Dec. 3, 1912.

Application filed August 3, 1912. Serial No. 713,121.

To all whom it may concern:

Be it known that I, WILLIAM A. McKNIGHT, a citizen of the United States, residing at Alexis, in the county of Warren and State of Illinois, have invented certain new and useful Improvements in Septic Tanks, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to septic tanks and has for its principal object the provision of a tank of the above stated character whereby the sewerage contained therein will be thoroughly and efficiently catalyzed.

A further object of the invention is the provision of an apparatus of the foregoing character comprising a series of compartments communicating with one another and a system of pipes whereby the lighter and heavier constituents of the sewerage may be separated, dissolved and deodorized by oxidation.

A still further object of the invention is the provision of a hermetically sealed septic tank comprising a series of compartments separated by partitions and means for carrying noxious gases from the inlet compartment direct to the outlet compartment, thus providing a separate exit for the gas from that of the sewerage to the outlet compartment.

With these and other objects in view as will appear as the description proceeds, the invention comprises various novel features of construction, combination and arrangement of parts as will be more fully described hereinafter and set forth with particularity in the appended claims.

Referring to the drawings Figure 1 is a plan view of my improved septic tank showing the cover thereof removed; Fig. 2 is a vertical longitudinal sectional view of the tank; Fig. 3 is a transverse sectional view taken on the line 3—3 of Fig. 2; and Fig. 4 is a detail perspective view of one end of one of the overflow troughs.

By referring to the drawings, the reference numeral 1 will be seen to designate a tank constructed of concrete or masonry walls. These walls consist of end walls 2 and 3 respectively, side walls 4, a bottom 5, a top or cover 6 and intermediate walls or partitions 7 and 8 respectively, dividing the tank into a series of compartments A, B and C.

The bottom 5 of the tank is formed adjacent its peripheral edge with a continuous groove 9 and is adapted to receive the tongues 10 formed on the lower inner edge of the end and side walls. The opposite vertical edges of the side walls 4 are recessed to form grooves 11 and are adapted to receive the opposite vertical edges of the end walls 2 and 3.

Arranged transversely of the tank are overflow troughs 12 and are provided upon their ends and bottoms with tongues 13 and 14 which are adapted to seat within corresponding recesses 15 and 16 formed in the bottom 5 and the side walls 4 respectively. The upper face of the overflow trough is provided with a V-shaped channel 17 which extends through its length to points adjacent its opposite ends. Grooves 18 extend from the terminal ends of the channel 17 through the upper face of the overflow trough 12 through the ends of the latter and are adapted to receive the lower longitudinal edges of the partitions 7 and 8. The side walls 4 are provided at spaced intervals with vertical grooves 19 adapted to receive the opposite vertical edges 20 of the partitions 7 and 8. The cover 6 is also provided in its under face adjacent its peripheral edge with a continuous groove 21 adapted to receive the tongues 22 upon the upper inner edges of the end walls 2 and 3 and the side walls 4, whereby said tank may have its cover hermetically sealed thereon. The cover is also provided in its under face with transverse grooves 23 adapted to receive the upper edges of the partitions 7 and 8 whereby each of the compartments A, B and C may be hermetically sealed from one another. An inlet sewer pipe 24 enters the tank through the end wall 2 and extends down into the compartment A and terminates at a point below the level of the surface of the sewerage contained within the tank. An overflow pipe 25 enters the compartment C through the rear end wall 3 and terminates at a point below the surface of the sewerage. Arranged within the compartment C and surrounding the overflow pipe 25 is a suitable wall 26 which may be formed of masonry or any other suitable material. This wall extends upward to a point slightly above the lower end of the overflow pipe 25. A pipe 27 extends from the compartment A through the partitions 7 and 8 and into the compartment C, thus establishing a direct communication between the compartments A and C whereby the nox-

ious gases accumulating within the compartment A may be conveyed directly to the compartment C over the compartment B.

In the operation of my invention the sewerage flows in through the inlet pipe 24 into the compartment A where the heavier constituents are arrested by the overflow trough 12 whereas the lighter can pass over the overflow trough and beneath the lower edge of the partition 7 into the compartment B; the heavier or more dense constituents in compartment B will descend and be arrested by the other overflow trough 12 and the lighter will pass over the overflow trough 12 and beneath the partition 8 into the compartment C where again the heavier constituents will descend and be arrested by the wall 26, the lighter or remaining portion of the sewerage passing over the wall 26 and out through the overflow pipe 25.

From the foregoing description taken in connection with the accompanying drawings, the advantages of construction and the method of operation will be readily apparent to those skilled in the art to which the invention relates, and while I have described the principle of operation of the invention, together with the device which I now consider to be the best embodiment thereof, I desire to have it understood that such changes may be made when desired, as are within the scope of the appended claims.

Having thus fully described my invention what I claim as new is:

1. A septic tank, comprising a series of compartments separated by partitions, troughs arranged below said partitions, the top of each of said troughs being formed with centrally disposed longitudinal grooves at its opposite ends for the reception of the bottom edges of said partitions, an inlet pipe communicating with one of said compartments, and an outlet pipe communicating with the last consecutive compartment.

2. A septic tank, comprising a series of compartments, separated by partitions, a trough arranged beneath each of said partitions, the side walls and the bottom of said troughs being formed with longitudinal centrally disposed ribs, said ribs adapted to engage corresponding grooves in the bottom and side walls of said tank, whereby said troughs are held in position in said tank, an inlet pipe for one of said compartments, and an outlet pipe for the last consecutive compartment.

3. A septic tank comprising a series of compartments separated by partitions, a trough arranged beneath each of said partitions, each of said troughs being formed upon its upper face with centrally disposed longitudinal slots at its opposite ends, the lower edges of said partitions adapted to rest in said slots whereby the upper edges of the troughs are arranged in a plane slightly above the lower edges of the partitions, a pipe extending through said partitions establishing direct communication between the first and last consecutive compartments, an inlet pipe for one of said compartments, and an outlet pipe for the last consecutive compartment.

4. A septic tank, a cover for said tank, the tank being provided with a series of consecutive compartments separated by partitions, each of said partitions terminating at a point above the bottom of the tank, an overflow trough arranged beneath said partition, the upper longitudinal edges of the latter projecting upward to a point slightly above the lower edge of the partition, a pipe establishing direct communication between the first and last of said consecutive compartments, an inlet pipe entering at the top and depending into one of said compartments, an overflow pipe entering and depending into the last consecutive compartment, and a wall arranged within this latter compartment around the lower depending end of the overflow pipe, said wall projecting upward to a point slightly above the lower end of the overflow pipe and above and beyond the level of the overflow trough.

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

WILLIAM A. McKNIGHT.

Witnesses:
F. C. NOYES,
D. M. HARKRADER.