(No Model.)

F. L. UNION.

CESSPOOL.

No. 424,838. Patented Apr. 1, 1890.

FIG. 2.

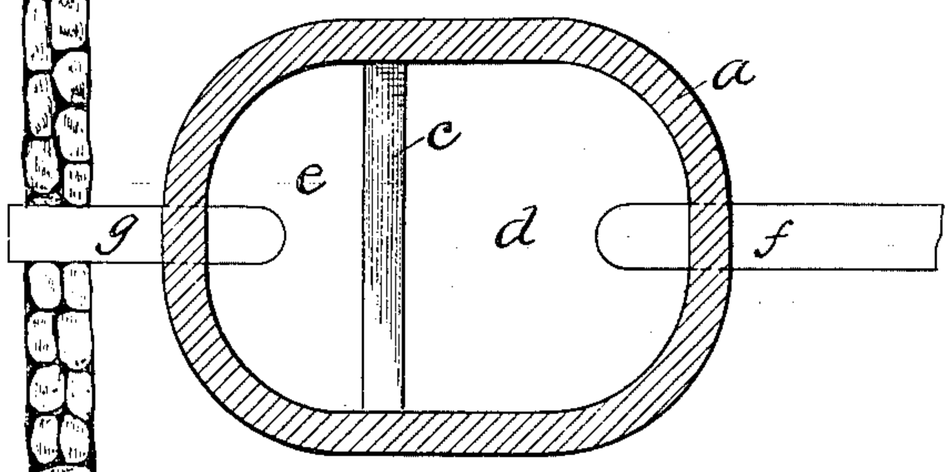
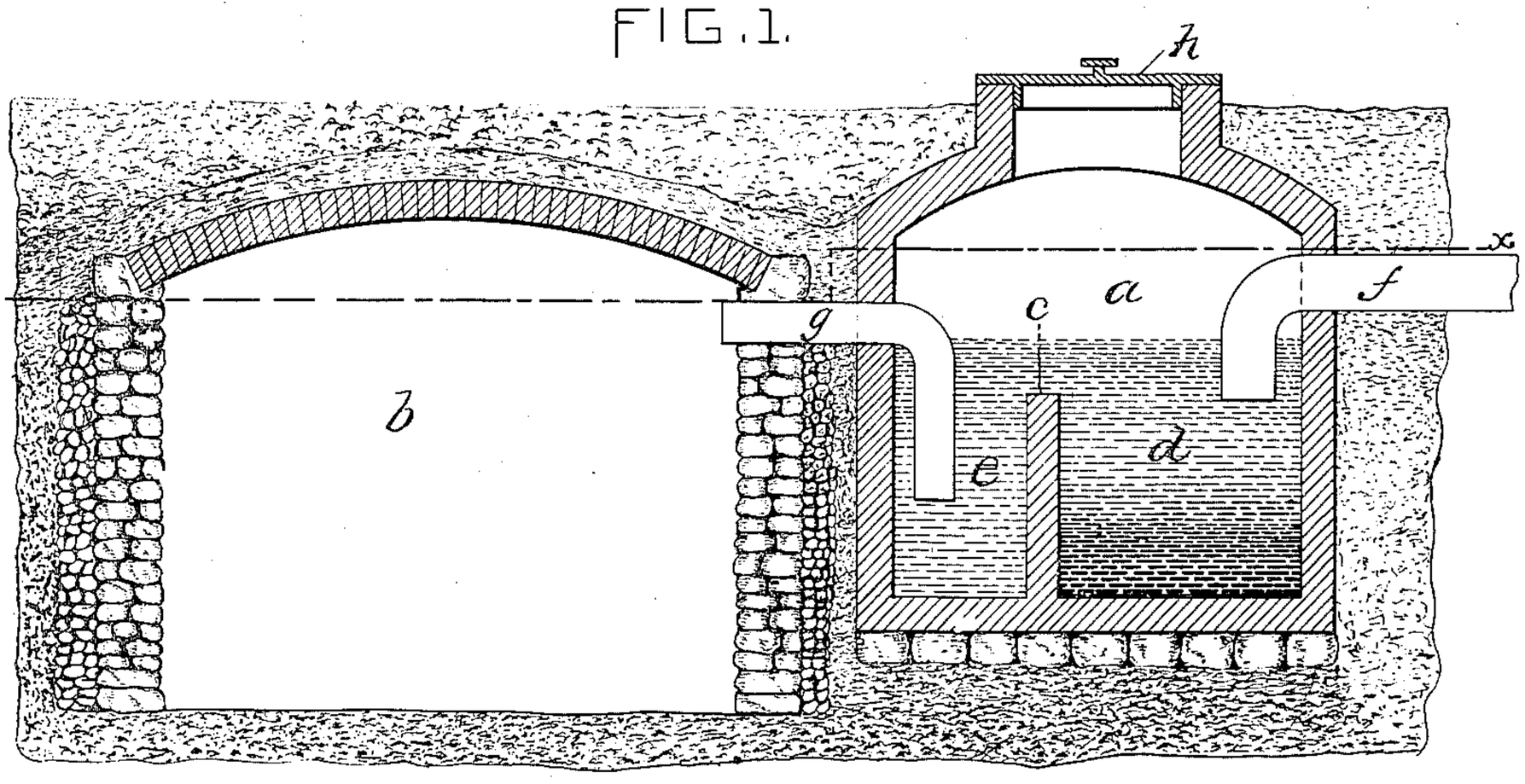


FIG. 1.



WITNESSES:

R. Henry Marsh.

W. G. Ramsay.

INVENTOR:

F. L. Union.

by

Wyatt, Brown & Crossley.

Attys.

UNITED STATES PATENT OFFICE.

FRANK L. UNION, OF BOSTON, MASSACHUSETTS.

CESSPOOL.

SPECIFICATION forming part of Letters Patent No. 424,838, dated April 1, 1890.

Application filed September 3, 1889. Serial No. 322,899. (No model.)

To all whom it may concern:

Be it known that I, FRANK L. UNION, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Cesspools, of which the following is a specification.

It is the object of my invention to provide such improvements in cesspools as will result in the complete separation of the solid and semi-solid portions of the sewage from the water or purely fluid portions, so that the latter may be taken up or absorbed by the earth and the former may be kept from operating to prevent such absorption by the earth of the latter.

A difficulty arising in the use of cesspools as heretofore constructed has been that the semi-solids of the sewage matter, particularly grease and greasy matter, have been allowed to flow into the reservoir or pool from which it was designed the water should be absorbed by the earth. The effect of this has been to in a short time so coat the walls of said reservoir or pool and close the pores or passages in the earth as to prevent absorption of the water. By my invention this difficulty is entirely overcome, the construction of my improved cesspool being such as to effectively separate the solids and semi-solids of the sewage matter from the water or purely liquid matter, retaining the former in the receiving-pool and delivering the latter to the discharging-pool, or pool from which it is designed the earth shall absorb the water.

My invention will first be described in connection with the accompanying drawings and the letters of reference marked thereon, forming a part of this specification, and subsequently pointed out in the claim.

Of the drawings, Figure 1 is a vertical sectional view of my improved cesspool. Fig. 2 is a diagram in sectional plan of the invention, the section being taken on the line *x x* of Fig. 1.

In carrying out my invention I construct a receiving and separating pool *a* of suitable form and dimensions and a communicating discharge-pool *b*, usually, though not always, larger than the pool *a*. In the pool *a*, across the same and extending up to a point about midway between the top and bottom of the pool, I in most instances construct a water-tight partition or wall *c*, dividing the said pool *a* into two compartments *d e*. The sewage and water flows into pool *a* through the pipe *f*, which pipe enters the said pool *a* at a high point and turns downward to a point which brings its mouth below an imaginary horizontal line passing just over the top of the partition *c*. This arrangement of the supply-pipe *f* is preferred by me, though it is not essential, since it can be variously arranged without departing from the nature or spirit of the invention.

g designates the pipe affording means of communication between the pools *a* and *b*. The said pipe *g* extends from a point in the compartment *e* considerably below the top of the partition *c* up to a point just below the line (horizontally considered) upon which the pipe *f* enters the pool *a*, at which point the said pipe *g* turns and passes through to and into the pool *b*, the sides or walls of which are constructed of loose stone, as shown, or otherwise formed so as to permit the water in the said pool to soak or filter therefrom into the ground.

Pool *a* is provided with a man-hole *h*, and pool *b* may be constructed in like manner.

In the use of my improved cesspool the water-carried sewage will flow into the pool *a* through the pipe *f*, the solids and all matter of greater specific gravity than the water settling to the bottom of the compartment *d*, while the clear water will rise and flow over the partition *c* into the compartment *e*, from whence it will be taken by the pipe *g* and conveyed to the pool *b*. The oil and grease in the sewage, which operates to coat or line the walls of cesspools, so as to prevent the water in the said pools from being absorbed by or soaking into the earth, rises to the surface in the pool *a*, and is kept entirely from flowing into pool *b* by reason of the fact that the water flowing into the pool *b* enters the communicating pipe *g* at a point greatly below the surface of the water in the compartment *e* and below the top of the partition *c*. In this way nothing but comparatively clear water will be delivered in pool *b*, which clear water will readily soak into or be absorbed from said pool by the earth. Pool *a*, being designed as a means for separating the solids and semi-solids from the water, is made water-tight. The said solid matter, or

matter of heavier specific gravity, will be collected in the compartment *d*, from which compartment it may be removed from time to time, as the necessities of the case may demand. The greasy matter and matter of less specific gravity than the water can also be readily skimmed off from the top of the water in the pool *a* and removed through the manhole opening thereinto.

Having thus described my invention, I declare that what I claim is—

The improvement in cesspools consisting of a water-tight reservoir provided with a water-tight partition *c*, a receiving-pipe extending into said reservoir and extending downward therein to a point below the surface of the water, a reservoir having sides through which the water may percolate, and a pipe extending from a point below the surface of the water in the water-tight reservoir up to a point below that at which the receiving-pipe enters said water-tight reservoir, at which point it communicates with the second-mentioned reservoir, as set forth.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 26th day of August, A. D. 1889.

FRANK L. UNION.

Witnesses:

ARTHUR W. CROSSLEY,

C. F. BROWN.