H. C. ROGERS.

SEPTIC TANK.

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917,663. Patented Apr. 6, 1909.

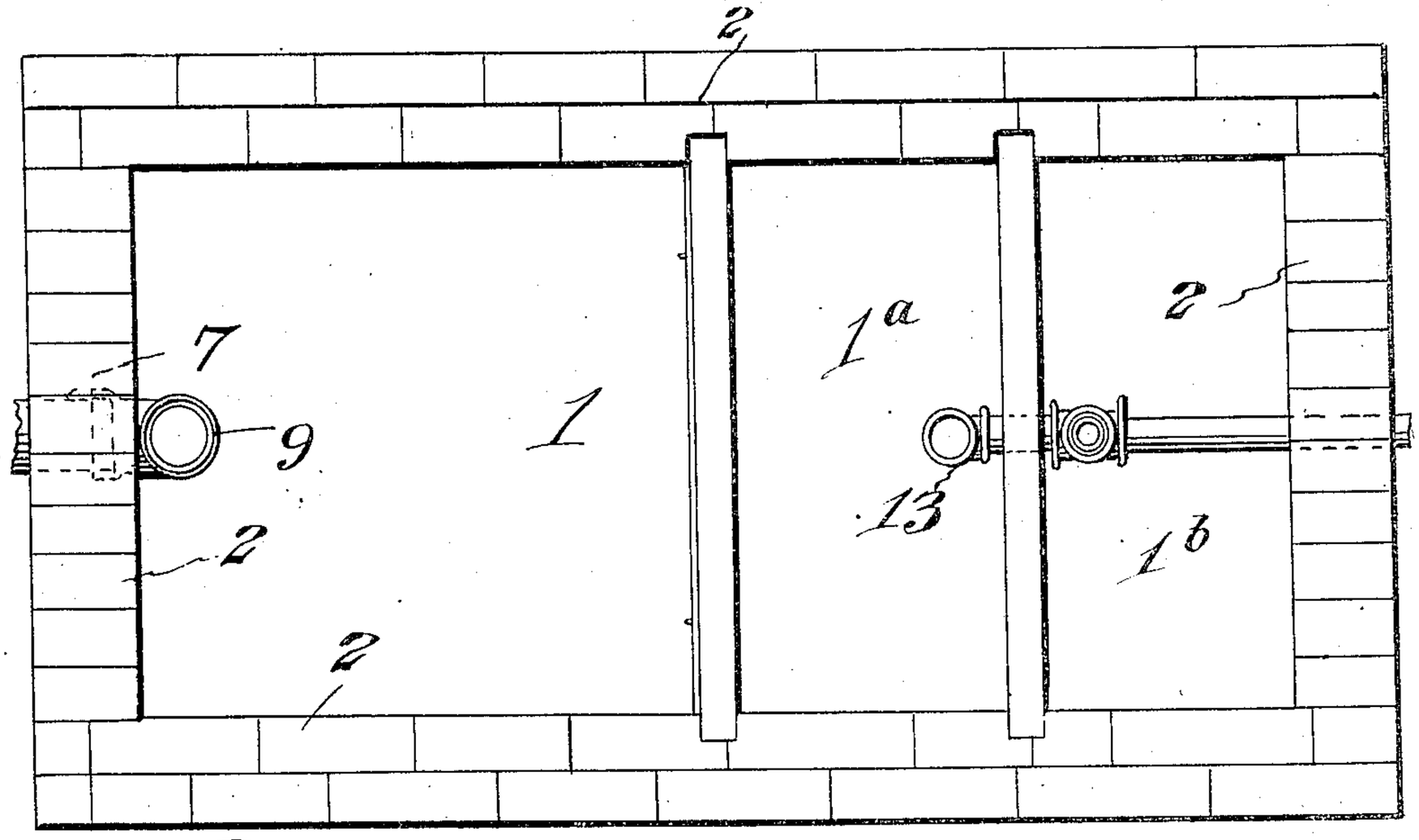

Fig. 1.

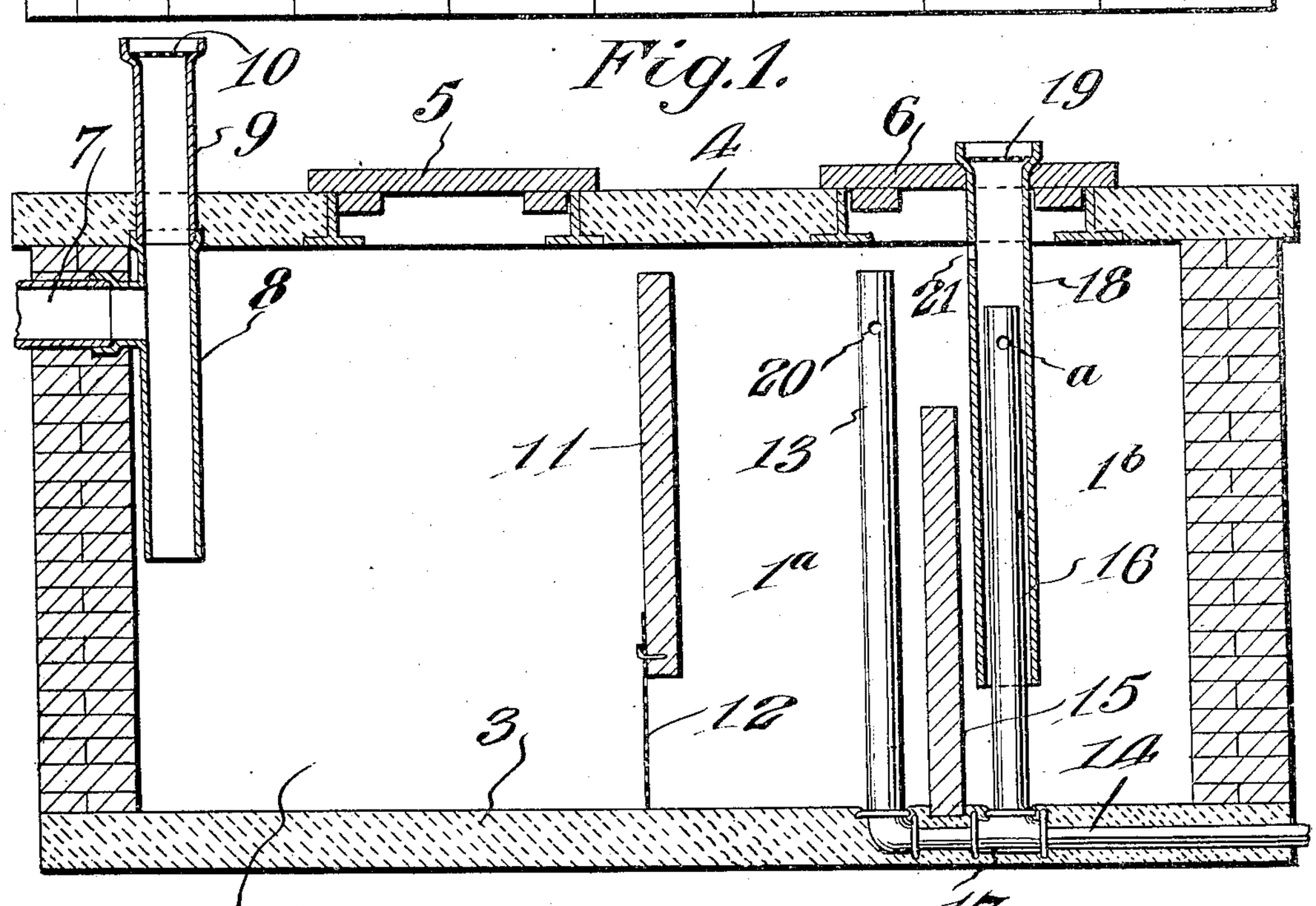

Fig. 2.

Witnesses:—

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UNITED STATES PATENT OFFICE.

HENRY C. ROGERS, OF ESTES PARK, COLORADO.

SEPTIC TANK.

No. 917,663. Specification of Letters Patent. Patented April 6, 1909.

Application filed August 5, 1908. Serial No. 447,160.

To all whom it may concern:

Be it known that I, HENRY C. ROGERS, a subject of the King of Great Britain, residing at Estes Park, in the county of Larimer and State of Colorado, have invented new and useful Improvements in Septic Tanks, of which the following is a specification.

This invention relates to apparatus designed for the purpose of catalyzing sewage and one of the principal objects of the invention is to provide a tank having various partitions and a system of pipes whereby the lighter and heavier constituents of the sewage may be separated, dissolved and deodorized by oxidation.

Another object of the invention is to provide a tank in which the inlet pipe is placed in communication with the outer air in such a way that the noxious gases from the tank cannot enter the sewer or house drain.

These and other objects may be attained by the construction illustrated by the accompanying drawing, in which:—

Figure 1 is a plan of the tank with the cover or top removed, Fig. 2 is a vertical longitudinal section of the same with the cover and manholes in place.

Referring to the drawing, the numeral 1 designates a tank constructed of masonry or concrete walls, a concrete bottom and a top 4, preferably formed of concrete and provided with suitable manholes 5 and 6. The inlet sewer pipe 7 enters the tank through a depending pipe 8 which terminates at a point below the level of the surface of the sewage in the tank. A ventilating pipe 9 is attached to the pipe 8 and extended through the top 4, the upper end of said pipe having a perforated grating through which only fresh air can enter and ventilate the sewer. A partition 11 is formed in the compartment 1, and at the bottom of said partition a perforated screen 12 is secured, said screen preventing coarser particles of sewage from passing into compartment 1^a of the tank. A stand pipe 13 is disposed in compartment 1^a, said pipe being connected to the outlet pipe 14. A partition 15 of less height than partition 11 separates the compartment 1^a from the third compartment 1^b. In this compartment an oxidizing device is located, comprising the vertical pipe 16 connected by the tee 17 to the outlet pipe 14, said pipe 16 being surrounded by a larger pipe 18 which extends up through the manhole cover 6 and provided with a perforated grating 19 through which air may be fed to the effluent for the purpose of oxidizing it. A perforation 21 in the pipe 18 allows gases to be displaced from the tank when sewage enters. The pipe 16 has perforations *a* through which the effluent passes to the outlet pipe 14.

The operation of my invention may be briefly described as follows: The inlet pipe 7 with the vertical pipes 8 and 9 act as a water seal for preventing the sewage gas from entering the sewer or house drain but at the same time admitting fresh air to the same. After the sewage passes into the compartment 1 the lighter constituents will be retained while that portion of the heavier which can pass the screen 12 will move to compartments 1^a; of the sewage in the compartment 1^a the heavier constituents will be arrested by the partition 15 whereas the lighter can pass over said partition into compartment 1^b; the heavier or more dense constituents in compartment 1^b will descend and, by displacement, will be forced to rise into the sleeve pipe 18 until it passes into the pipe 16 through the small holes near its top. This pipe 16 being in direct communication with the outside air the "effluent", or matter discharged, becomes oxidized. If the circulation of air about the pipe 18 is sluggish a forced draft can be induced by artificial means such as by a spray of water. If the discharge from the tank is more than normal the sewage will rise till it flows over the top of the pipe 16, when the tendency to rise will be arrested. The tank can be drained of its liquid contents by removing the pipes 13, 16 and 18 whenever required.

I claim:

1. A septic tank comprising a series of compartments divided by partitions, a stand pipe in one of said compartments by removing which the compartment can be drained; an oxidizing device in another compartment comprising a pipe extending to a point near the top of the tank, and a sleeve surrounding said pipe and leading to the outer air.

2. A septic tank provided with a series of partitions dividing the tank into separate compartments, an inlet sewer pipe in one of said compartments, said inlet pipe having a depending connection forming a water seal, a connection extending through the top to ventilate the sewer and house drain, one of said partitions being provided with a screen at its lower side; a stand pipe, an outlet pipe connected thereto, an oxidizing device in a

separate compartment, said oxidizing device comprising a pipe connected to the outlet pipe and provided with perforations near its upper end, a sleeve surrounding said pipe, said sleeve leading to the outer air and provided with a foraminous top, and manholes leading to said tank.

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

HENRY C. ROGERS.

Witnesses:
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