

No. 876,217.

PATENTED JAN. 7, 1908.

W. MOWRER.
GAS GENERATOR.
APPLICATION FILED MAR. 21, 1907.

Fig. 1.

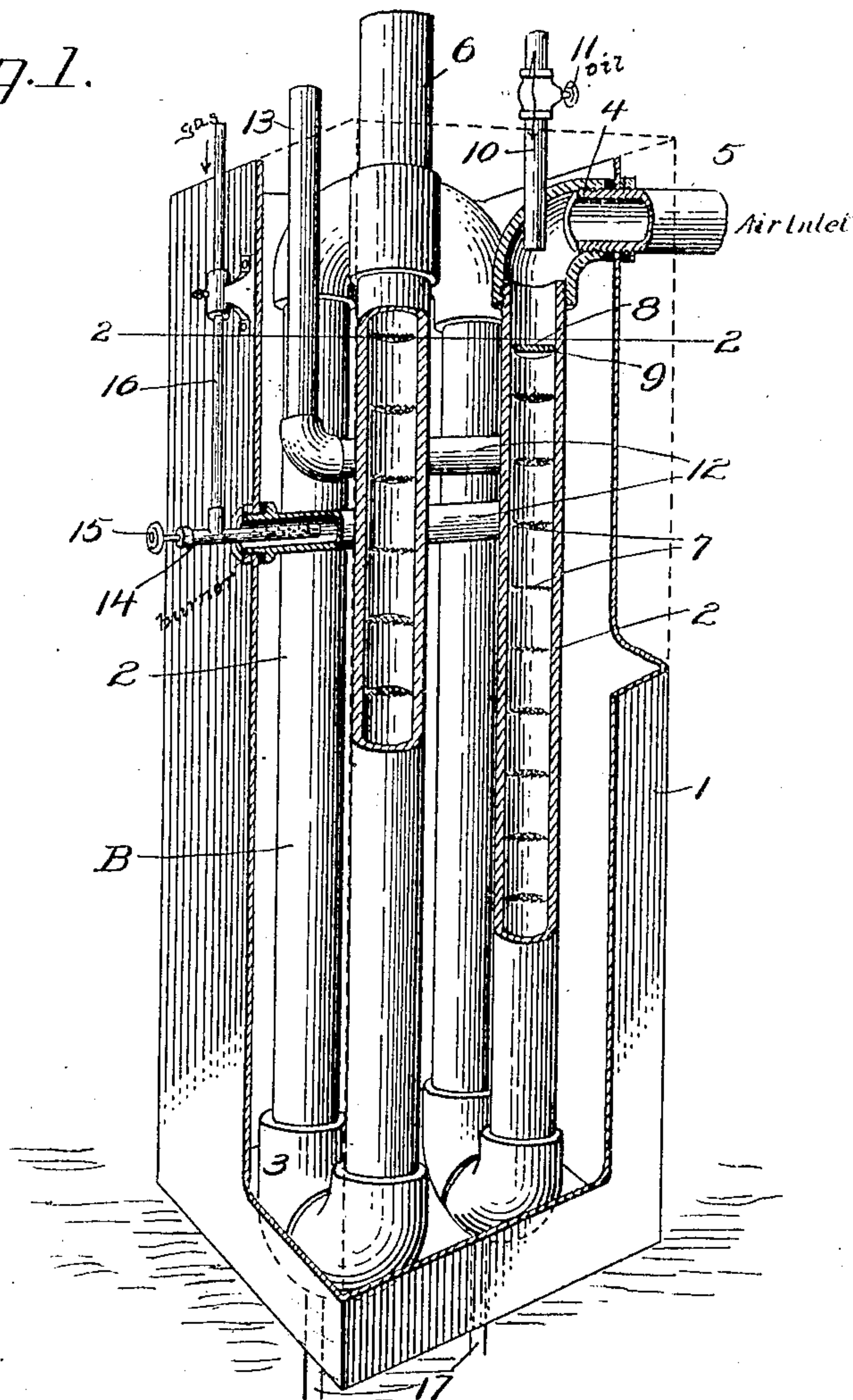
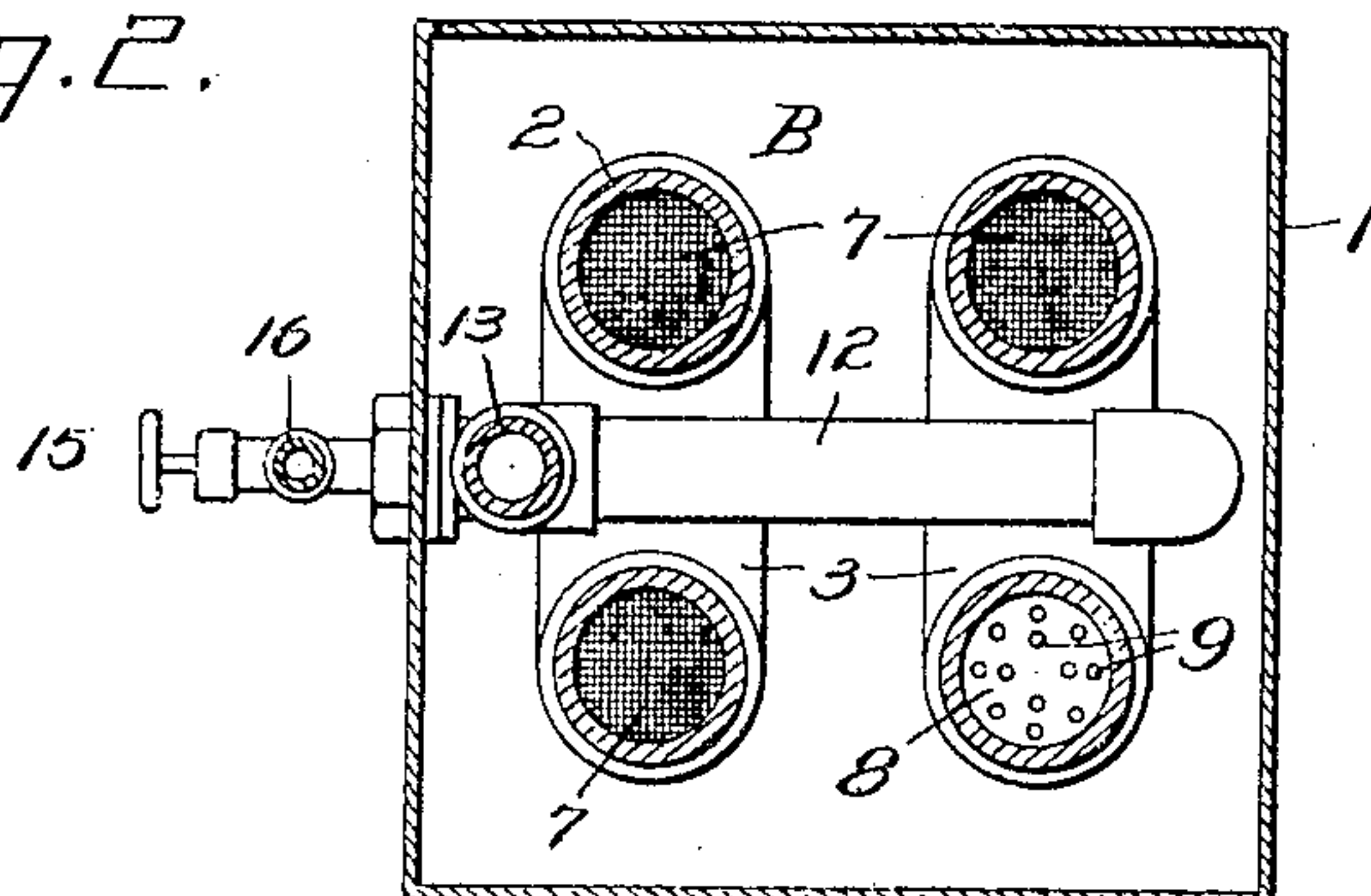


Fig. 2.



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Witnesses

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WILLARD MOWRER, OF BLOOMFIELD, NEBRASKA.

GAS-GENERATOR.

No. 876,217.

Specification of Letters Patent.

Patented Jan. 7, 1908.

Application filed March 21, 1907. Serial No. 363,708.

To all whom it may concern:

Be it known that I, WILLARD MOWRER, a citizen of the United States, residing at Bloomfield, in the county of Knox and State of Nebraska, have invented new and useful Improvements in Gas-Generators, of which the following is a specification.

This invention relates to devices for generating gas from alcohol, gasoline or other light hydrocarbons and the like; and it has for its object to provide a device of this class which shall possess superior advantages in point of simplicity, durability and general efficiency, and by the use of which the various fluids referred to may be quickly and safely converted into gas for illuminating and other purposes.

With these and other ends in view which will readily appear as the nature of the invention is better understood, the same consists in the improved construction and novel arrangement and combination of parts which will be hereinafter fully described and particularly pointed out in the claims.

In the accompanying drawings has been illustrated a simple and preferred form of the invention; it being, however, understood that no limitation is necessarily made to the precise structural details therein exhibited, but that changes, alterations and modifications within the scope of the invention, may be resorted to when desired.

In the drawing, Figure 1 is a perspective view of a gas generator constructed in accordance with the invention; parts of the same having been broken away for the purpose of exhibiting the interior construction. Fig. 2 is a horizontal sectional view taken on the plane indicated by the line 2—2 in Fig. 1.

Corresponding parts in both figures are denoted by like characters of reference.

Within a tank 1 which may be of any desired shape and dimensions, is arranged a pipe coil B which in its preferred form is composed of a plurality of vertically disposed pipe sections 2—2, suitably connected by ordinary L's or other appropriate figures, as shown at 3, to form a continuous duct or passage having an inlet including an L 4 and a laterally extending branch pipe 5 and an outlet 6. Each of the pipe sections 2 is provided with a plurality of foraminous diaphragms or screens 7 disposed at intervals therethrough, and the pipe having the inlet passage is provided near its upper end with a disk 8 having apertures 9. Extended through the L 4, and di-

rected towards the disk 8, is a nozzle 10 having a valve 11 to regulate the supply of alcohol, gasoline or other liquid which is introduced, under considerable pressure, through the nozzle 10 and which being forcibly projected against the diffusing plate 8 will be converted into a spray which is readily vaporized.

Suitably connected with the tank 1 is a heating apparatus consisting of a pipe coil 12 having a terminal vertically extending pipe 13 for the escape of products of combustion, and equipped with a suitable gas burner 14 having a controlling valve 15 and connected with a source of gas supply by a pipe 16.

Suitably connected with the bottom of the tank 1 are pipes 17 which may be used for filling and draining the tank and for maintaining circulation of water therethrough.

In operation, the tank is filled or partly filled with water which is heated to the desired temperature. Alcohol, gasoline, or other liquid which is introduced under pressure through the nozzle 10, on striking the plate 8 becomes diffused or atomized and mingled with atmospheric air entering through the inlet 5 where it may be supplied in any suitable manner. The mixed air and vapor passes through the pipe coil B where, being compelled to pass through the foraminous diaphragms or screens 7, it is thoroughly commingled while at the same time it is maintained at the desired temperature by the hot water contained in the tank until it is discharged through the outlet 6 from whence it may be conveyed to the burner or burners where it is to be consumed.

This improved apparatus is simple in construction and perfectly safe in operation for the purpose of providing gas for illuminating purposes in town plants, in stores, factories, private residences and other places where it may be desired.

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

1. In a device of the class described, a tank, a pipe coil in said tank comprising a plurality of suitably connected vertically disposed pipe sections, foraminous diaphragms or screens disposed at intervals through the pipe sections, a laterally extending air inlet connected with one of the pipes, a perforated disk supported in said pipe adjacent to the air inlet, a vertically disposed valved nozzle extending through the air inlet and directed toward the perfo-

rated disk, and a heater disposed in the upper portion of the tank.

2. A gas generating device comprising a tank having drain pipes connected with the
5 bottom thereof, a pipe coil disposed in the tank and including a plurality of suitably connected vertically disposed pipe sections, screens disposed at intervals through the
10 pipe sections, a laterally extending air inlet connected with one of the pipes, a vertically disposed valved nozzle extending through the air inlet into said pipe, a perforated disk

supported in said pipe adjacent to the nozzle and the air inlet, and a heating apparatus including a pipe coil connected with the tank 15 and disposed in the upper portion of the latter.

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

WILLARD MOWRER.

Witnesses:

H. D. WILLEY,
W. D. FUNK.