

No. 610,159.

Patented Aug. 30, 1898.

R. G. SPEER.
CARBURETER.

(Application filed Aug. 30, 1897.)

(No Model.)

Fig. 1

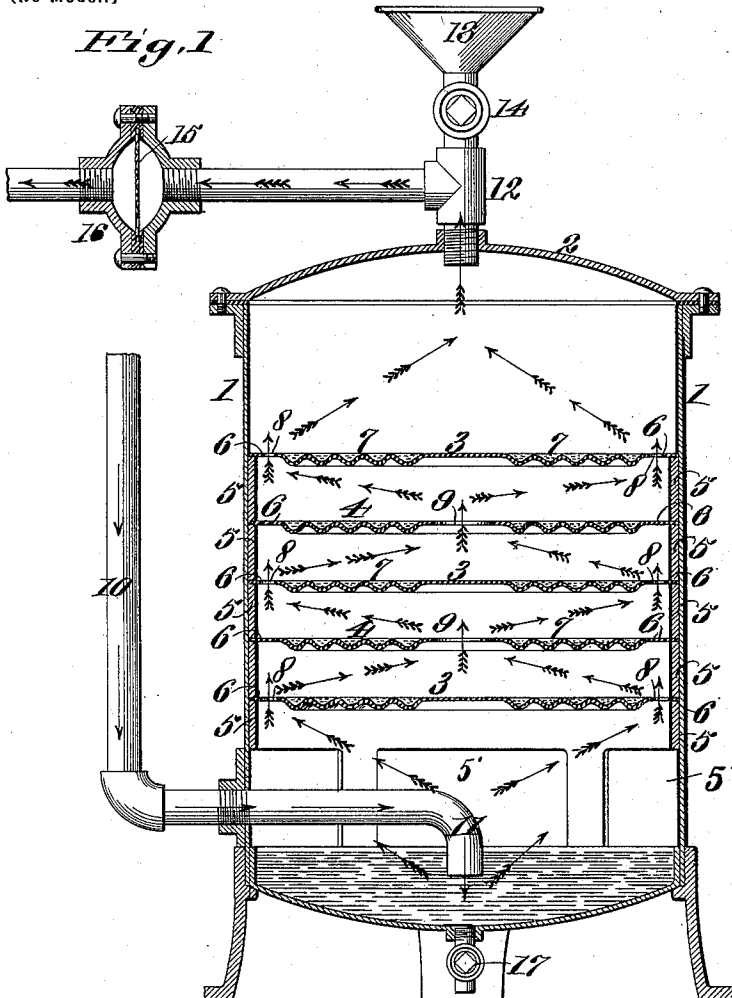


Fig. 2

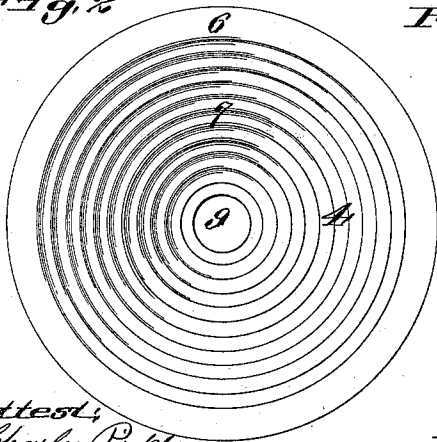
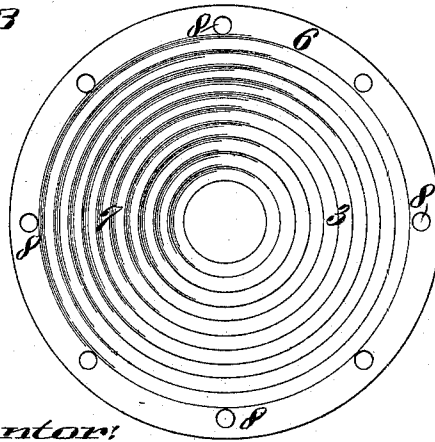


Fig. 3



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UNITED STATES PATENT OFFICE.

ROBERT G. SPEER, OF ST. LOUIS, MISSOURI.

CARBURETER.

SPECIFICATION forming part of Letters Patent No. 610,159, dated August 30, 1898.

Application filed August 30, 1897. Serial No. 650,048. (No model.)

To all whom it may concern:

Be it known that I, ROBERT G. SPEER, a citizen of the United States, residing at St. Louis, in the State of Missouri, have invented certain new and useful Improvements in Gas Apparatus; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification.

The present invention relates to that class of gas-making apparatus in which a body of air to form fuel and illuminating gas is enriched or charged with the vapor of a light hydrocarbon, such as gasoline, the object of the present improvement being to provide a simple, cheap, and effective apparatus by means of which such enrichment of the body of air is attained in a rapid and thorough manner, as will hereinafter more fully appear, and be more particularly pointed out in the claims. I attain such object by the construction and arrangement of parts illustrated in the accompanying drawings, in which—

Figure 1 is a longitudinal vertical section of an apparatus constructed in accordance with the present invention. Figs. 2 and 3 are plan views of the alternating trays of the present apparatus.

Similar numerals of reference indicate similar parts in the different views.

Referring to the drawings, 1 represents a closed casing that constitutes the main chamber of the present apparatus and which has a removable cover portion 2, by which access is gained to the interior of the casing for the purpose of repair and the like. Within the chamber is arranged a series of three or more horizontal trays or partitions 3 and 4, that are supported the proper distance apart by intermediate supporting-rings 5, as shown. The purpose of such arrangement is to provide for a ready and convenient removal of the trays 3 4 and their supporting-rings 5 through the open top of the inclosing chamber after the cover portion 2 is removed for the frequent cleaning of such parts from the dirt and sediment left in the apparatus, and for this purpose the trays and their supporting-rings are of a separate construction and loosely arranged within the inclosing chamber.

In the present invention the trays 3 and 4

are formed with a plane or flat marginal portion 6 and a central corrugated portion 7, the corrugations of which are of a concentric nature and arranged wholly below the plane of the flat marginal portion, as shown, so as to retain a body of the gasoline or other carbureting liquids in a separated condition upon the upper surface of such trays and in the present arrangement, as above described, prevent such gasoline from passing or seeping down in a direct manner at the loose spaces between the margin of such trays, their supporting-rings, and the inner wall of the inclosing casing.

Each alternate tray 3 will be formed with marginal passages or orifices 8, while the tray or trays 4 intermediate of the trays 3 will be formed with a central orifice or passage 9. With this construction a serpentine course will be imparted to the passing air, so as to bring the same into effective contact with the gasoline upon the trays to very thoroughly impregnate such air with the vapor and form a gas having illuminating and heating properties.

Air is introduced into the lower portion of the casing from any suitable source of pressure through the air-supply pipe 10, that has a downturned outlet end 11, that extends to or near the center of the casing, as shown, and in order that such pipe 10 will not interfere with the introduction into place of the lowermost supporting-ring 5 such ring will be formed with downwardly-extending feet 5', that rest upon the flange of the bottom and straddle such pipe, as shown in Fig. 1.

12 is the outlet-pipe, connecting with the top of the main chamber and extending to a gas burner or burners, &c.

13 is a filling-funnel connecting with the pipe 12, as shown, and adapted for use in replenishing the apparatus with gasoline from time to time. 14 is a cock controlling the passage from said funnel to the interior of the main chamber.

15 is a wire gage-barrier arranged in a suitable expanded housing 16 in the main outlet-pipe 12, the purpose being to prevent an accidental passage backward of the flame from a gas stove or burner into the interior of the main chamber to cause a dangerous explosion.

17 is a drain-pipe having a suitable con-

trolling-valve 17 and adapted to draw off the remainder of the gasoline, sediment, &c.

Having thus fully described my said invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a carbureting apparatus, the combination of a tank or casing having a removable cover portion, inlet and outlet pipes or passages connected to said casing, a series of trays arranged loosely within said casing and formed with plane marginal portions, and corrugated central portions, the corrugations being concentric, and a series of loose supporting-rings, arranged between the extreme marginal portions of the trays, said trays being formed alternately with a single central orifice and with a series of marginal orifices, substantially as set forth.

2. In a carbureting apparatus, the combination of a tank or casing, having inlet and outlet pipes or passages, a series of trays arranged one above the other in said casing in separated relation, and formed with plane

marginal portions, and corrugated central portions, the corrugations being concentric and arranged wholly below the plane of the marginal portion and adapted to contain a body of gasoline in a separated condition, the said trays being provided alternately with a single central orifice, and with a series of marginal orifices, substantially as set forth.

3. In a carbureting apparatus, the combination of tank or casing 1, an inlet-pipe 10, extending into the central part of the tank, and provided with a downturned end 11, an outlet-pipe 12, a filling-funnel 13, a series of removable trays 3 and 4, having alternate central and marginal orifices 9 and 8, and loose rings 5, supporting the trays in separated relation, substantially as set forth.

In testimony whereof witness my hand this 23d day of August, 1897.

ROBERT G. SPEER.

In presence of—

CHARLES PICKLES,
LOUIS DORiot.