H. E. WHITING.

FIXER FOR GASEOUS FUEL.

APPLICATION FILED FEB. 6, 1911.

1,023,402. **Patented Apr. 16, 1912.**

Fig. 1.

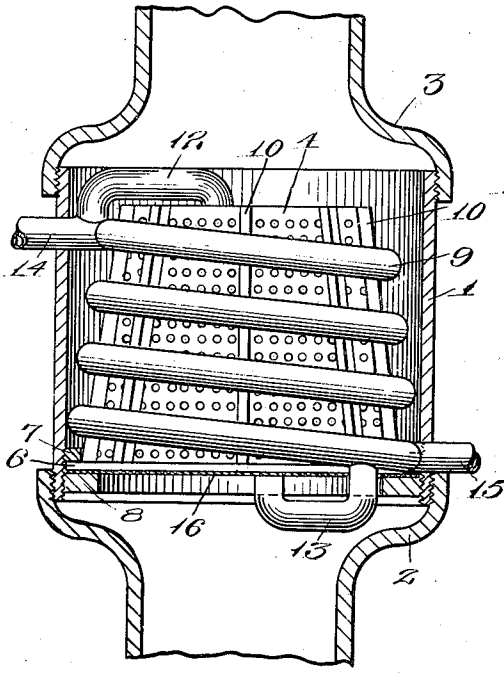


Fig. 2.

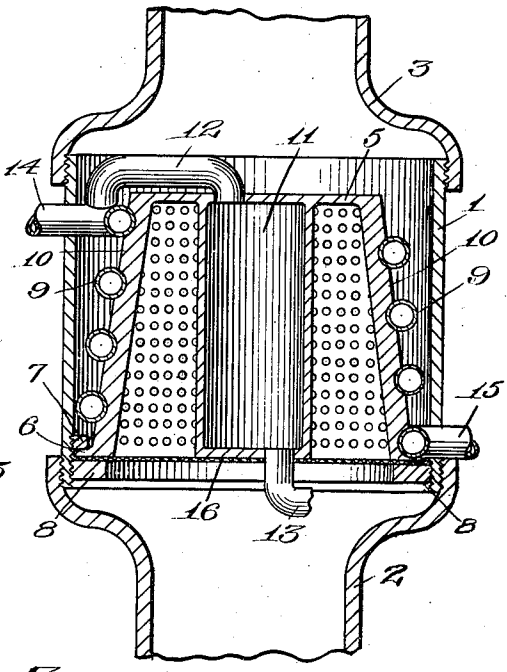
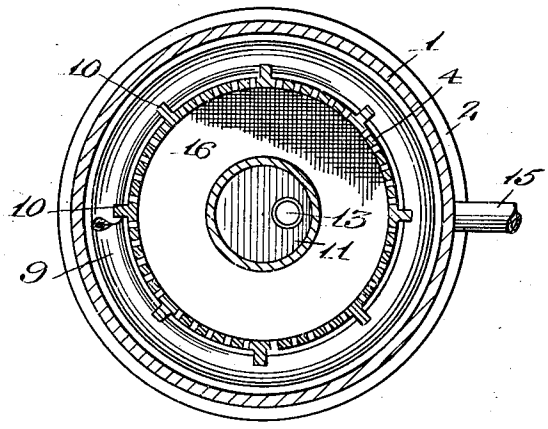


Fig. 3.



Witnesses

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FIXER FOR GASEOUS FUEL.

1,023,402. Specification of Letters Patent. Patented Apr. 16, 1912.

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To all whom it may concern:

Be it known that I, HERMAN E. WHITING, of Palmyra, in the county of Wayne and State of New York, have invented a new and useful Improvement in Fixers for Gaseous Fuel, which improvement is fully set forth in the following specification and shown in the accompanying drawings.

The present invention relates to fixers for gaseous fuels and it has for an object to provide a construction which will be effective in use and at the same time is simple in its operation and inexpensive to manufacture.

To these and other ends the invention consists in certain parts and combinations of parts, all of which will be hereinafter described, the novel features being pointed out in the appended claims.

In the drawings: Figure 1 shows a fixer constructed in accordance with this invention and having its casing in section to show interior parts; Fig. 2 is an axial section through the fixer as a whole; and Fig. 3 is a horizontal section.

In carrying out the invention, there may be employed a casing comprising in this instance a hollow cylindrical member 1 having an intake member 2 threaded on one end thereof and a discharge member 3 threaded on the opposite end. Within the casing 1 may be supported a hollow perforated member 4 which preferably is of frusto conical formation having its smaller end closed at 5 and having a flange at its larger end held against an internal annular rib 7 in the casing by a removable ring 8.

Arranged to be impinged by mixture passed through the perforations of the member 4 is a heating device, which perferably is in the form of a coil 9 of copper tubing passing around the hollow member 4 from one end to the other. The coil may be supported in spaced relation to the walls of the hollow member 4 and to this end the latter has longitudinal ribs 10 on its exterior notched at intervals to receive the coil.

To the end that the mixture may be heated prior to being passed through the perforated member 4, there may be arranged preferably within the perforated member a heating device 11 which may be supported centrally within the member 4 from the closed end 5 of the latter. The coil 9 may be heated by gases or hot water entering the fixer at 14 and discharging at 15, circulating connections 12 and 13 permitting the heating fluid to pass also through the heating device 11 and from the latter through the outlet 15.

A wire mesh screen 16 may cover the open large end of the member 4 to prevent dust or other fine particles collecting in the perforations of the member 4 or in the space within casing 1 about the member 4. This screen together with the perforation in the member 4 also prevents any back fire to the carbureter or fuel supply.

It is apparent that the explosive mixture entering into the intake 2 will first strike the screen 16 which collects all particles of dust or other extraneous matter. The mixture then enters the hollow member 4 and is heated by contact with the heating device 11, after which it passes through the openings in the hollow member 4 and is distributed in fine streams between the coils of and upon the heating coil 9, passing upon both sides of the latter, due to the fact that the coil is spaced from the member 4, and finally making its exit through outlet 3.

A fixer constructed in accordance with this invention is effective in its action, inexpensive to manufacture and not liable to get out of order.

The perforations are protected against the entrance of dust of other extraneous matter and any liquid in the mixture is deposited upon the walls of the perforations where it remains until it is properly fixed.

What I claim as my invention and desire to secure by Letters Patent, is—

1. A fixer for gaseous fuel comprising a hollow fuel distributer having perforated side walls, and a heating device for the fuel passing from the distributer embodying a plurality of coils surrounding the distributer the distributer extending throughout all the coils and the latter being spaced from each other and from the fuel distributer but located at such a distance from the distributer that the mixture is permitted to pass between them directly from the distributer.

2. A fixer for gaseous fuel comprising a hollow frusto-conical perforated fuel-distributer closed at its small end and a heating-fluid conductor in the form of a plurality of coils surrounding the distributer and having their radii gradually decreasing in length toward the smaller end of the dis-

tributer, the coils being spaced from each other and from the distributer and having the mixture from the distributer passing between them.

3. A fixer for gaseous fuels comprising a perforated fuel-distributer, spacing ribs on the exterior of said distributer, and a heating-fluid conductor embodying coils supported on the ribs in spaced relation to the distributer and spaced from each other to permit the mixture from the distributer to pass between them.

4. A fixer for gaseous fuel comprising a perforated hollow member, a heating device arranged within said hollow member, and a heating device on which the mixture is distributed by the hollow member arranged about the same.

5. A fixer for gaseous fuel comprising a hollow member having perforated side walls, a heating coil surrounding the same, and a heating member arranged within said hollow member.

6. A fixer for gaseous fuel comprising a hollow perforated member, a heating coil surrounding said member, a heating device in said member, and circulating connections between the coil and the heating device.

7. A fixer for gaseous fuel comprising a hollow perforated member closed at one end, a heating coil surrounding said member, and a centrally arranged heating device supported in said hollow perforated member on the closed end thereof.

8. A fixer for gaseous fuel comprising a frusto-conical hollow member having its side walls perforated and closed at its smaller end, ribs in the exterior of said hollow member, a heating coil supported by the ribs and surrounding said hollow member, and a heating device arranged centrally within the hollow member supported by the closed end of the latter and having circulating connection with the heating coil.

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Witnesses:

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