

J. VAN.
Gas-Burners for Heating.

No. 142,360.

Patented September 2, 1873.

FIG. 1.

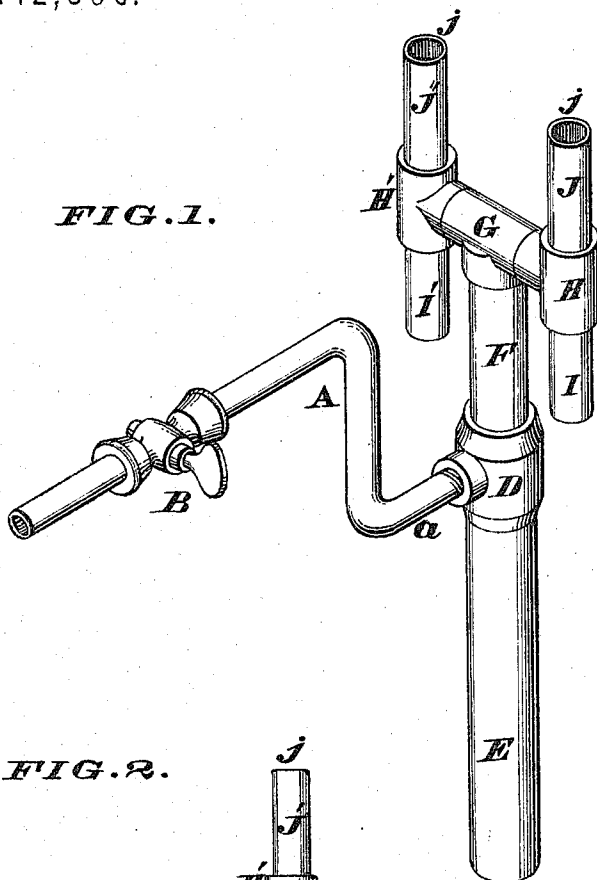


FIG. 3.

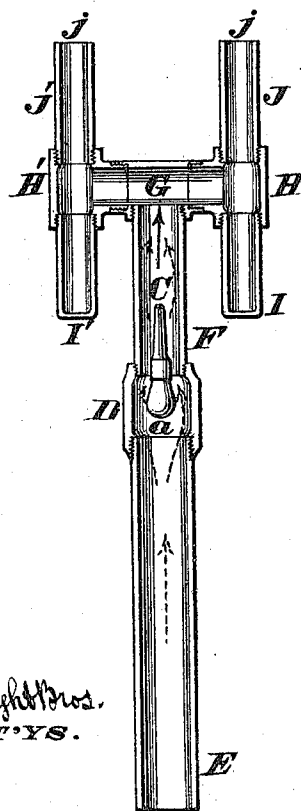
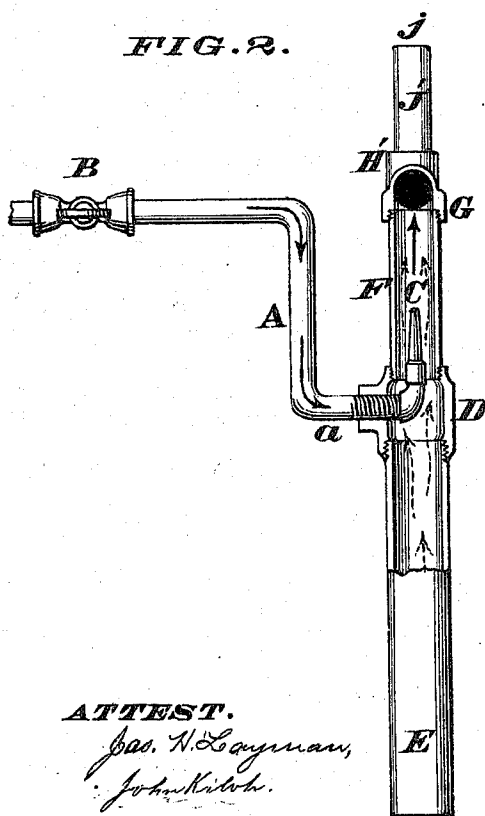


FIG. 2.



ATTEST.

Geo. H. Langman,
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John Van
Dyke & Bros.
ATT'YS.

UNITED STATES PATENT OFFICE.

JOHN VAN, OF CINCINNATI, OHIO.

IMPROVEMENT IN GAS-BURNERS FOR HEATING.

Specification forming part of Letters Patent No. **142,360**, dated September 2, 1873; application filed August 9, 1873.

To all whom it may concern:

Be it known that I, JOHN VAN, of Cincinnati, Hamilton county, Ohio, have invented a new and useful Gas-Burner for Heating Purposes, of which the following is a specification:

My invention relates to a form and arrangement of air-mixing and equalizing chambers with provisions for catching ashes and other débris, in combination with an ordinary or other gas-burner or ajutage inclosed within the same, for the purpose of producing from ordinary carbureted hydrogen of cities a blue or violet flame of intense heat-giving properties, and with a comparatively moderate consumption of gas.

Figure 1 is a perspective view of a duplex burner embodying my invention. Figs. 2 and 3 are vertical sections in planes at right angles to each other.

A is an ordinary bracket or service gas-pipe, having customary cock B and burner C. Screwed to the horizontal portion *a* of pipe A just behind the burner is a T-coupling, D, into whose lower opening is screwed my air-inlet pipe E, and into whose upper opening is screwed my air-and-gas-mingling pipe or chamber F, into which the burner proper, C, discharges. Pipe F is surmounted by a T-coupling, G, to which are connected two other T-couplings, H and H', into whose lower openings are screwed my catch and equalizing chambers I and I', and into whose upper openings are screwed my nozzles J and J', from

whose ventages *j* the now thoroughly intermingled air and gas escape in the form of intensely hot violet flames.

The combustion is found to be very perfect and equal, owing in part to the thorough mixing of the air and gas, and in part to the chambers I and I', which serve as a sort of pneumatic cushion to preserve an equal pressure of the escaping mixture. Said chambers also serve to catch any partially-burned particles that may fall into the burners J J'.

It will be seen that all parts of this burner are accessible for cleaning or examination, and that there is no part of it liable to become clogged, as is the case with the various forms of wire-gauze and foraminous diaphragms employed in gas-stoves of the kinds commonly used.

It will be seen that my arrangement converts one ordinary gas-burner into two or more heating-burners.

I claim herein as new and of my invention—

The arrangement of gas-pipe A *a*, cock B, burner C, T-couplings D G H H', air-inlet E, mingling-chamber F, catch and equalizing chambers I I', and nozzles J J', for the purpose set forth.

In testimony of which invention I hereunto set my hand.

JOHN VAN.

Attest:

GEO. H. KNIGHT,
JOHN KILOH.