

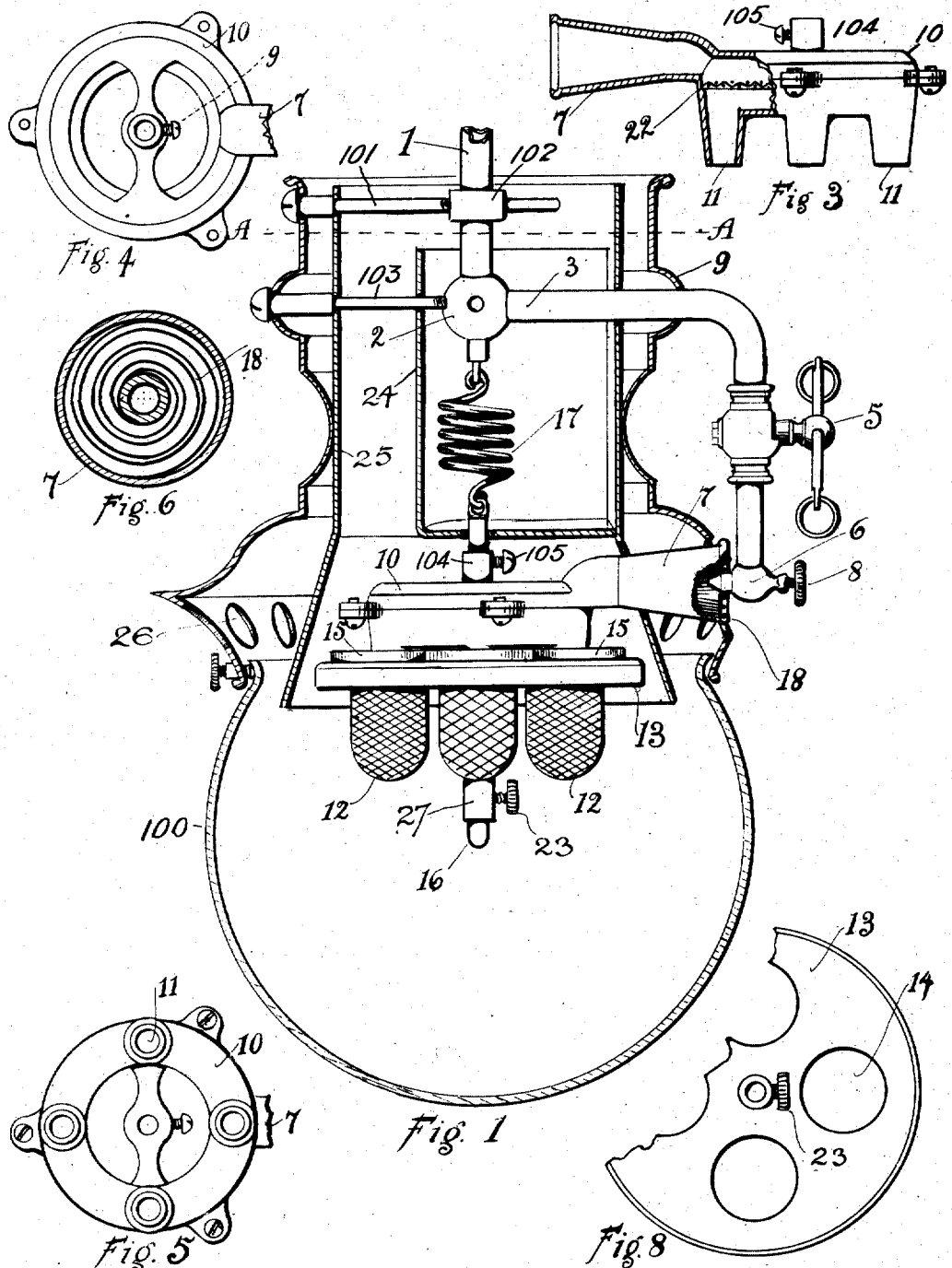
V. A. RETTICH.
GAS LAMP.

APPLICATION FILED MAY 20, 1909.

Patented Sept. 5, 1911.

2 SHEETS-SHEET 1.

1,002,315.



Witnesses
John Frew
Wm. Chipman.

Inventor
Victor A. Rettich

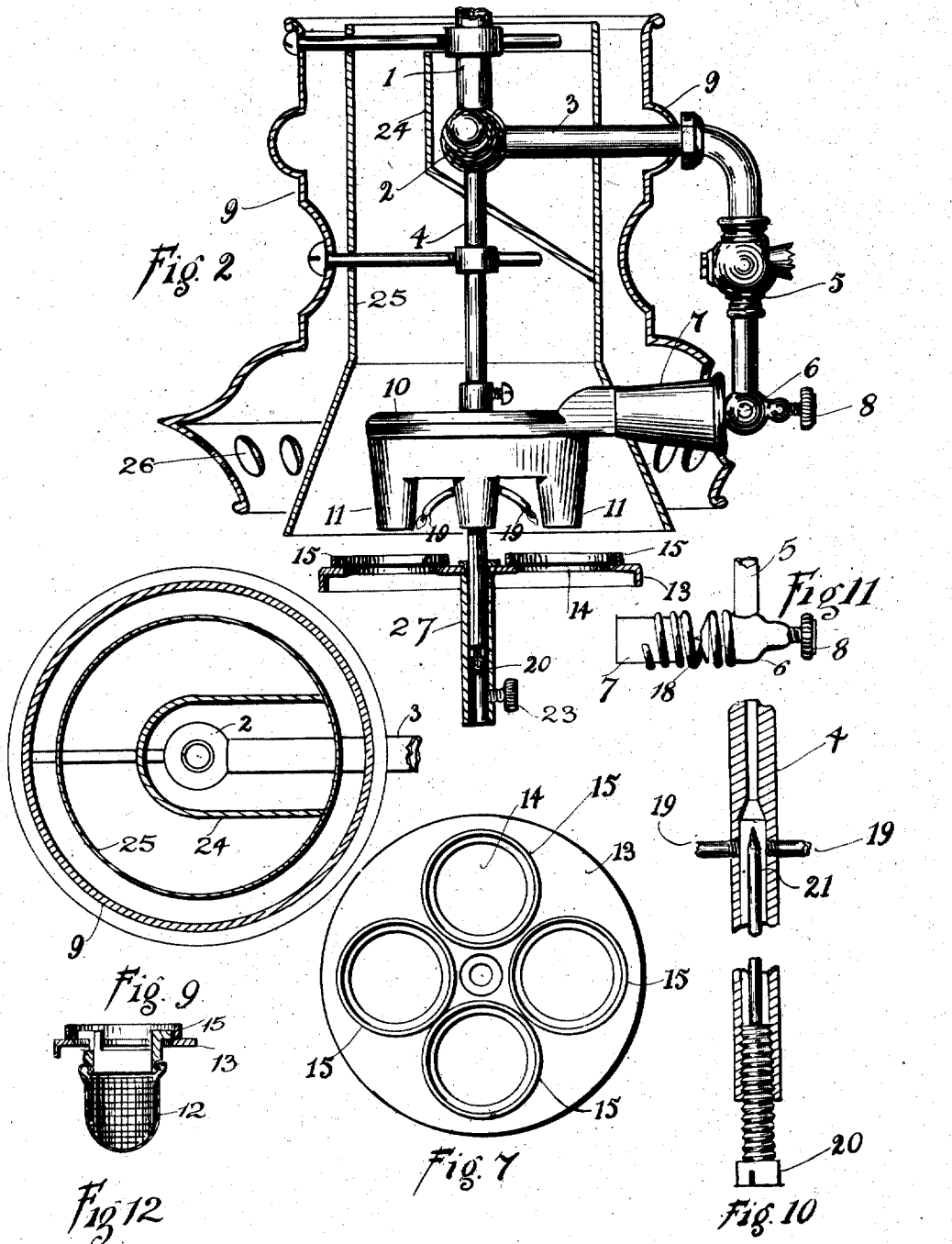
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Tos Chapman.

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UNITED STATES PATENT OFFICE.

VICTOR ALEXANDER RETTICH, OF NEW YORK, N. Y.

GAS-LAMP.

1,002,315.

Specification of Letters Patent.

Patented Sept. 5, 1911.

Application filed May 20, 1909. Serial No. 497,195.

To all whom it may concern:

Be it known that I, VICTOR ALEXANDER RETTICH, a subject of Great Britain, and a resident of New York city, in the county of New York and State of New York, have invented certain new and useful Improvements in Gas-Lamps, of which the following is a specification.

The invention relates to improvements in gas-lamps of the class employing mantles to be rendered incandescent when the lamp is in use, and it consists in the novel features, structure and combinations of parts herein-after described, and more particularly pointed out in the claims.

The object of my invention is to provide an improved lamp having a general appearance approximating that of an electric arc lamp and provided with inverted burners and suspended mantles.

Referring to the accompanying drawings: Figure 1 is a side sectional view of the lamp; Fig. 2 is a modification of the same lamp; Fig. 3 is a view, partly in section, of the multiple burner; Fig. 4 is a top plan of the burner; Fig. 5 is a bottom plan of the burner; Fig. 6 is an enlarged view of the gas and air mixer, showing part of the anti-shock device; Fig. 7 is a top plan of the mantle plate showing the guides 15; Fig. 8 is a bottom plan of the mantle plate, part of it being removed for convenience of drawing; Fig. 9 is a top section on the line A—A of Fig. 1; Fig. 10 is an enlarged sectional view of the supporting rod 4; Fig. 11 an alternative to Fig. 6; Fig. 12 shows part of a mantle plate with the mantle holder in position.

In the drawings 9 designates the exterior shell of the lamp, 25 a chimney therein, 10 the burner, 13 the mantle supporting plate, 12 the mantles suspended from said plate, 100 a glass globe protecting the mantles and suspended from the lower edge of said exterior shell, 1 the gas supply-pipe from which the lamp is suspended, 2 a hollow ball coupling screwed onto the lower end of said pipe, and 3 a branch gas-pipe screwed into the side of said ball and thence extending horizontally through openings in said chimney and shell to without the same and thence branching downwardly and terminating in line with a conical tube 7 leading into the said burner, said pipe 3 being provided in its vertical branch with a manually oper-

ative valve fitting 5 for opening and closing the gas passage through the same and having at its lower end a controlling nozzle 6 equipped with a regulating needle 8 and projected within the outer and larger end of the said tube 7, which is rigid with the burner.

The exterior shell 9 will be of ornamental configuration, by preference, and it is secured by a screw 101 to a collar 102 on the pipe 1 and by a screw 103 to the coupling 2, said screws extending horizontally through holes in said shell and the chimney 25 and serving to aid in suspending the chimney and securing it in position. Usually I shall employ only the screw 103, which is sufficient under all ordinary conditions. The horizontal portion of the pipe 3 extends through holes in the shell 9 and chimney 25 and by entering the coupling 2 aids in suspending the lamp and maintaining the proper relation of said shell and chimney to each other. The screw 103, coupling 2 and horizontal branch of the pipe 3 are amply sufficient for suspending the lamp from the pipe 1 and maintaining the due relation to each other of the shell and chimney, and at this point I would call attention to the ease with which the shell, chimney, pipe 3 and pipe 1 may be assembled and connected together in the construction presented by me. Since the pipe 3 has a horizontal portion said pipe may be employed with the least detrimental effect to the lamp and passed directly through the shell and chimney and screwed into the coupling 2.

The chimney 25 is preferably flared at its lower end, and within the enlarged lower end of the chimney is located the burner 10, which will preferably be of cast metal and suspended from the coupling 2 by means of a rod 16, which may, if desired, have interposed between its upper and lower parts or sections a cushioning spring 17 intended to absorb shocks or jars.

The burner 10 is hollow and it has projecting downwardly from it at equi-distant points a series of heads 11 which enter and discharge the mixed gas and air into the mantles 12. The burner 10 is provided at one side with the inlet tube or pipe 7, which extends horizontally through the chimney 25 and shell 9 and is of bell-shape at its outer end, as shown. The nozzle 6 for gas projects into the open mouth of the tube 7

but does not fill the same and hence when the lamp is in use the flow of gas from the nozzle will result in air being drawn into the tube 7 for admixture with the gas, the mixture filling the chamber within the burner and discharging through the heads 11. I preferably provide within the burner 10 a sheet of gauze 22 to aid in compelling a thorough admixture of the gas and air.

10 Within the outer end of the tube 7 and surrounding the inwardly projecting end of the nozzle 6, may be provided a helical spring 18 to serve as a cushioning or shock-absorbing medium. The burner 10 is provided

15 with a collar 104 and screw 105 for convenience in connecting it with the rod by which it is suspended. The mantle supporting plate 13 is in the form of a horizontal disk having a central opening or sleeve 27

20 to be slipped upwardly upon the rod 16, which in addition to its other duties, serves to properly center said plate with relation to the burner 10. The plate 10 contains openings 14 through which the mantles 12

25 may be inserted, the shoulder around the open upper end of the mantles serving to prevent the mantles from escaping downwardly from the plate 13. The plate 13 is formed around the openings 14 with upwardly extending flanges 15 to house the

30 upper edges of the mantles. The plate 13 is adjustably secured in position by a set screw 23 and hence may be raised and lowered at will. Within the chimney 25 I preferably provide a protecting wall 24 for shielding from the heat the coupling 2 and so much of the pipe 3 as may be within the chimney.

In Figs. 2 and 10 I show a modification

40 of a portion of my lamp residing mainly in extending a pipe 4 downwardly from the coupling 2 to provide pilot burner-tips 19 for lighting the lamp when the gas is turned on by the opening of the valve 5. The flow

45 of gas to the tips 19 may be controlled by a screw 20 and needle point 21. In Fig. 2 I omit the spring 17 of Fig. 1.

The operation of the lamp will be understood without detailed explanation. The

50 gas may be turned on by means of the valve 5 and its flow to the burner regulated by the needle 8. The mixture of gas and air passes through the tube 7 to the burner 10 and thence through the heads 11 to the mantles

55 12, which, on the lighting of the gas at the heads 11, become incandescent.

My invention provides a lamp of great efficiency and one of very durable character and capable of ready manufacture. The

60 arrangement of the pipe 3 is a very desirable feature, since said pipe comprises simply two right-angular branches, with the vertical branch fully exposed and having the valve 5 and nozzle 6, while the horizontal

65 branch may be passed directly through

aligned holes in the sides of the shell and chimney and screwed into the coupling 2.

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

1. An incandescent gas lamp for suspension from a gas-supply pipe, comprising an exterior shell, a chimney within said shell having an enlarged lower end, a multiple burner within the lower end of said chimney and having its series of discharge heads projected downwardly, an apertured mantle-plate below said burner, inverted mantles suspended through the openings in said plate in line with said heads, a coupling on the gas supply pipe within said chimney, a gas-pipe having a horizontal member extending outwardly from said coupling through the sides of said chimney and shell and a vertical member extending downwardly and having on its lower end a discharge nozzle, a tube extending outwardly from said burner and receiving the discharge from said nozzle and the entrained air, means suspending said burner and said plate, and means for independently detachably securing said burner and said plate to their suspending means; substantially as set forth.

2. An incandescent gas lamp for suspension from a gas-supply pipe, comprising an exterior shell, a chimney within said shell having an enlarged lower end, a multiple burner within the lower end of said chimney and having its series of discharge heads projected downwardly, an apertured mantle-plate below said burner, inverted mantles suspended through the openings in said plate in line with said heads, a coupling on the gas supply pipe within said chimney, a gas-pipe having a horizontal member extending outwardly from said coupling through the sides of said chimney and shell and a vertical member extending downwardly and having on its lower end a discharge nozzle, a tube extending outwardly from said burner and receiving the discharge from said nozzle and the entrained air, and a rod suspended from said coupling and extending downwardly through said burner and said plate and centering said plate below said burner; substantially as set forth.

3. An incandescent gas lamp for suspension from a gas-supply pipe, comprising an exterior shell, a chimney within said shell having an enlarged lower end, a burner within the lower end of said chimney having a gas-discharge head projected downwardly, a mantle plate below said burner, an inverted mantle suspended through an aperture in said plate in line with said discharge head, a coupling on the gas-supply pipe within the lamp, a gas-pipe having a horizontal member extending outwardly from said coupling and a vertical member extending downwardly and having a valve and on its

lower end a discharge nozzle and a regulating valve, and a tube extending outwardly from said burner and receiving the discharge from said nozzle and the entrained air; substantially as set forth.

4. An incandescent gas lamp for suspension from a gas supply pipe, comprising an exterior shell, a chimney within said shell having an enlarged lower end, a burner within the lower end of said chimney having a gas-discharge head projected downwardly, a mantle plate below said burner, an inverted mantle suspended through an aperture in said plate in line with said discharge head, a coupling on the gas-supply pipe within the lamp, a gas-pipe having a horizontal member extending outwardly from said coupling and a vertical member extending downwardly and having a valve and on its lower end a discharge nozzle and a regulating valve, a tube extending outwardly from said burner and receiving the discharge from said nozzle and the entrained air, and a rod having an interposed spring suspending said burner and plate from said coupling; substantially as set forth.

5. An incandescent gas lamp for suspension from a gas-supply pipe, comprising an exterior shell, a chimney within said shell having an enlarged lower end, a burner within the lower end of said chimney having a gas-discharge head projected downwardly, a mantle plate below said burner, an inverted mantle suspended through an aperture in said plate in line with said discharge head, a coupling on the gas supply pipe within the lamp, a gas-pipe having a horizontal member extending outwardly from said coupling and a vertical member extending downwardly and having a valve and on its lower end a discharge nozzle and a regulating valve, a tube extending outwardly from said burner and receiving the discharge from said nozzle and the entrained air, and a rod having an interposed spring suspending said burner and plate from said coupling, combined with means for independently and adjustably securing said burner and plate on said rod; substantially as set forth.

6. An incandescent gas lamp for suspension from a gas supply pipe, comprising an exterior shell, a chimney within said shell having an enlarged lower end, a burner within the lower end of said chimney having a gas-discharge head projected downwardly, a mantle plate below said burner, an inverted mantle suspended through an aperture in said plate in line with said discharge head, a coupling on the gas-supply pipe, a gas-pipe extending from said coupling to the exterior of the lamp and thence downwardly and having in its exterior portion a valve and at its lower end a discharge nozzle and a control valve, and a tube provided with a bell-mouth extending from said

burner and receiving the discharge from said nozzle and the entrained air; substantially as set forth.

7. In a gas lamp, the combination with the gas supply pipe, of an exterior shell, a chimney within said shell, a burner disposed at the lower end of said chimney, provided with a horizontally disposed inlet tube extending outwardly through said chimney and shell, a coupling on said gas supply pipe within said chimney, a gas delivery pipe having a horizontal portion extending from said coupling through the sides of said chimney and shell and a vertical portion extending downwardly and having at its lower end a discharge nozzle delivering to said burner tube and a valve for said gas delivery pipe.

8. In a gas lamp, the combination with the gas supply pipe, of an exterior shell, a chimney within said shell, a coupling on said gas supply pipe within said chimney, said coupling being provided with a delivery member projecting through the sides of said chimney and shell, a burner disposed at the lower end of said chimney suspended from said coupling, said burner being provided with a horizontally disposed inlet tube arranged through the walls of the said chimney and shell, a gas delivery nozzle on said coupling delivering to said burner tube, and a valve for said coupling delivery member arranged on the outside of said casing.

9. In a gas lamp, the combination with the gas supply pipe, of an exterior shell, a chimney within said shell, a gas supply pipe coupling, a horizontally disposed gas delivery member for said coupling projecting through the sides of said chimney and casing, said gas delivery member being provided with a valve and a nozzle on the outside of said shell, and a burner suspended from said coupling, said burner being provided with a horizontally disposed inlet tube arranged through said chimney and shell to receive the gas from said nozzle.

10. In a gas lamp, the combination with the gas supply pipe, of an exterior shell, a chimney within said shell, a gas supply pipe coupling, a horizontally disposed gas delivery member for said coupling projecting through the sides of said chimney and casing, said gas delivery member being provided with a valve and a nozzle on the outside of said shell, and a burner, said burner being provided with a horizontally disposed inlet tube arranged through said chimney and shell to receive the gas from said nozzle.

11. In a gas lamp, the combination with the gas supply pipe, of an exterior shell, a chimney within said shell, a gas supply pipe coupling having a delivery member projecting through the sides of said chimney and shell, said chimney being provided with a protecting wall for said coupling, a delivery

nozzle and a valve for said gas delivery member, and a burner suspended from said coupling, said burner being provided with an inlet tube arranged through the wall of said chimney and shell to receive gas from said delivery nozzle.

12. In a gas lamp, the combination with the gas supply pipe, of an exterior shell, a chimney within said shell, a gas supply pipe coupling having a delivery member projecting through the sides of said chimney and shell, said chimney being provided with a protecting wall for said coupling, a delivery nozzle and a valve for said gas delivery member, and a burner, said burner being provided with an inlet tube arranged through the wall of said chimney and shell to receive gas from said delivery nozzle.

13. In a gas lamp, the combination with the gas supply pipe, of an exterior shell, a chimney within said shell, a gas supply pipe coupling having a delivery member projecting through the sides of said chimney and shell, a gas delivery nozzle and a valve for said gas delivery member, and a burner suspended from said coupling, said burner being provided with an inlet tube arranged through the wall of said chimney and shell to receive gas from said delivery nozzle.

14. In a gas lamp, the combination with the gas supply pipe, of an exterior shell, a chimney within said shell, a gas supply pipe coupling having a laterally-projecting delivery member projecting through the wall of said shell, said chimney being provided with a protecting wall for said coupling, a delivery nozzle and a valve for said gas delivery member, and a burner suspended from said coupling, said burner being provided with an inlet tube arranged to receive gas from said delivery nozzle.

15. In a gas lamp, the combination with the gas supply pipe, of an exterior shell, a chimney within said shell, a gas supply pipe coupling having a laterally-projecting delivery member projecting through the wall of said shell, said chimney being provided with a protecting wall for said coupling, a delivery nozzle and a valve for said gas delivery member, and a burner, said burner being provided with an inlet tube arranged to receive gas from said delivery nozzle.

16. In a gas lamp, the combination with the gas supply pipe, of an exterior shell, a chimney within said shell, a gas supply pipe coupling having a laterally-projecting delivery member projecting through the wall of said shell, a delivery nozzle and a valve for said gas delivery member on the outside of said shell, and a burner suspended from said coupling, said burner being provided with an inlet tube arranged through the wall of said shell to receive gas from said delivery nozzle.

17. In a gas lamp, the combination with

the gas supply pipe, of an exterior shell, a chimney within said shell, a coupling on said gas supply pipe, a gas delivery member extending outwardly from said coupling, said delivery member being provided with a valve and a gas delivery nozzle, a burner having a laterally-projecting inlet tube disposed to receive the gas from said nozzle, a burner supporting rod suspended from said coupling, said burner being adjustably and removably mounted on said rod, and a mantle support adjustably mounted on said rod.

18. In a gas lamp, the combination with the gas supply pipe, of an exterior shell, a coupling on said gas supply pipe, a gas delivery member extending outwardly from said coupling, said delivery member being provided with a valve and a gas delivery nozzle, a burner having a laterally-projecting inlet tube disposed to receive the gas from said nozzle, a burner supporting rod suspended from said coupling, and a mantle support adjustably mounted on said rod.

19. In a gas lamp, the combination with a gas supply pipe, of a chimney, a gas supply pipe coupling, a horizontally disposed delivery member for said coupling projecting through the side of said chimney, said gas delivery member being provided with a valve and a nozzle on the outside of said chimney, and a burner, said burner being provided with a horizontally disposed inlet tube arranged through said chimney to receive the gas from said nozzle.

20. In a gas lamp, the combination with a gas supply pipe, of a chimney, a gas supply pipe coupling having a delivery member projecting through the side of said chimney, said chimney being provided with a protecting wall for said coupling, a delivery nozzle and a valve for said gas delivery member, and a burner suspended from said coupling, said burner being provided with an inlet tube arranged through the wall of said chimney to receive gas from said delivery nozzle.

21. In a gas lamp, the combination with a gas supply pipe, of a chimney, a gas supply pipe coupling having a delivery member projecting through the side of said chimney, a delivery nozzle and a valve for said gas delivery member, and a burner suspended from said coupling, said burner being provided with an inlet tube arranged through the wall of said chimney to receive gas from said delivery nozzle.

22. In a gas lamp, the combination with a gas supply pipe, of a chimney, a gas supply pipe coupling having a delivery member projecting through the side of said chimney, said chimney being provided with a protecting wall for said coupling, a delivery nozzle and a valve for said gas delivery member, and a burner, said burner being provided

with an inlet tube arranged through the wall of said chimney to receive gas from said delivery nozzle.

23. In a gas lamp, the combination with the gas supply pipe, of a chimney, a gas supply pipe coupling having a laterally projecting delivery member projecting from said chimney, said chimney being provided with a protecting wall for said coupling, a delivery nozzle and a valve for said delivery member on the outside of said chimney, and a burner provided with an inlet tube arranged to receive gas from said delivery nozzle.

24. In a gas lamp, the combination with the gas supply pipe of a chimney, a gas supply pipe coupling having a delivery member, projecting from said chimney, a delivery nozzle and a valve for said delivery member, and a burner suspended from said coupling, said burner being provided with an inlet tube arranged to receive gas from said delivery nozzle.

25. In a gas lamp, the combination with the gas supply pipe of a chimney, a coupling on said gas supply pipe, a gas delivery member for said coupling, said delivery member being provided with a valve and a gas delivery nozzle, a burner having an inlet tube disposed to receive gas from said nozzle, a burner supporting rod suspended from said coupling, said burner being adjustably and removably mounted on said rod, and a mantle support adjustably mounted on said rod.

26. In a gas lamp, the combination with the gas supply pipe, of a chimney, a coupling on said gas supply pipe, a gas delivery member for said coupling, said delivery

member being provided with a valve and a gas delivery nozzle, a burner having an inlet tube disposed to receive gas from said nozzle, a burner supporting rod suspended from said coupling and a mantle support mounted on said rod.

27. In a gas lamp, the combination with the gas supply pipe, of a chimney, a coupling on said gas supply pipe, a gas delivery member for said coupling projecting from said chimney, provided with a valve and a gas delivery nozzle without the chimney, a burner having an inlet tube disposed to receive gas from said nozzle, and a burner support on said coupling.

28. In a gas lamp, the combination with the gas supply pipe, of a chimney, a coupling on said gas supply pipe, a burner gas delivery member for said coupling, a burner, a burner supporting rod suspended from said coupling, said burner being adjustably and removably mounted on said rod and a mantle support adjustably mounted on said rod.

29. In a gas lamp, the combination with the gas supply pipe, of a chimney, a coupling on said gas supply pipe, a burner gas delivery member for said coupling, a burner, a burner supporting rod suspended from said coupling and a mantle support mounted on said rod.

Signed at New York city, in the county of New York and State of New York, this 19th day of May A. D. 1909.

VICTOR ALEXANDER RETTICH.

Witnesses:

ARTHUR MARION,
CHAS. C. GILL.