

Geo. H. Wilson. Vapor Burner.

116385

PATENTED JUN 27 1871

Fig. 1

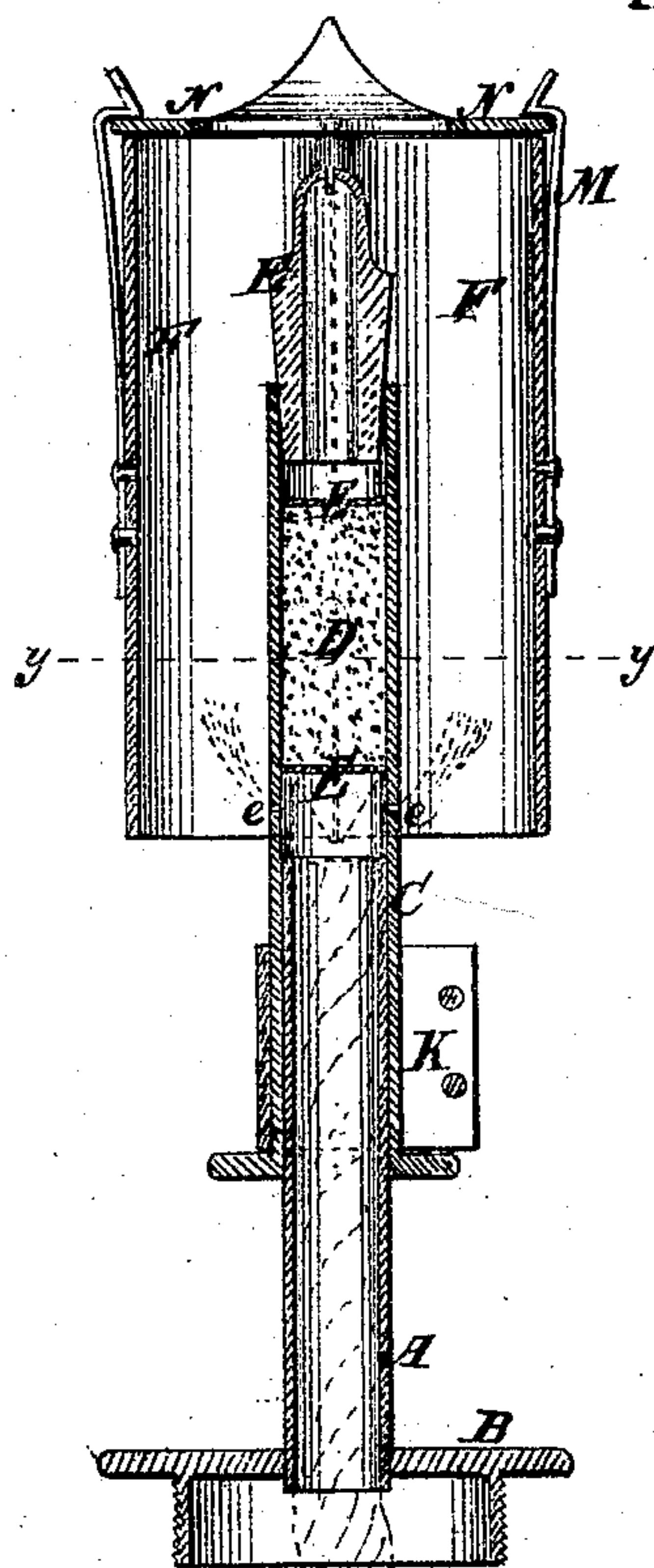


Fig. 4.

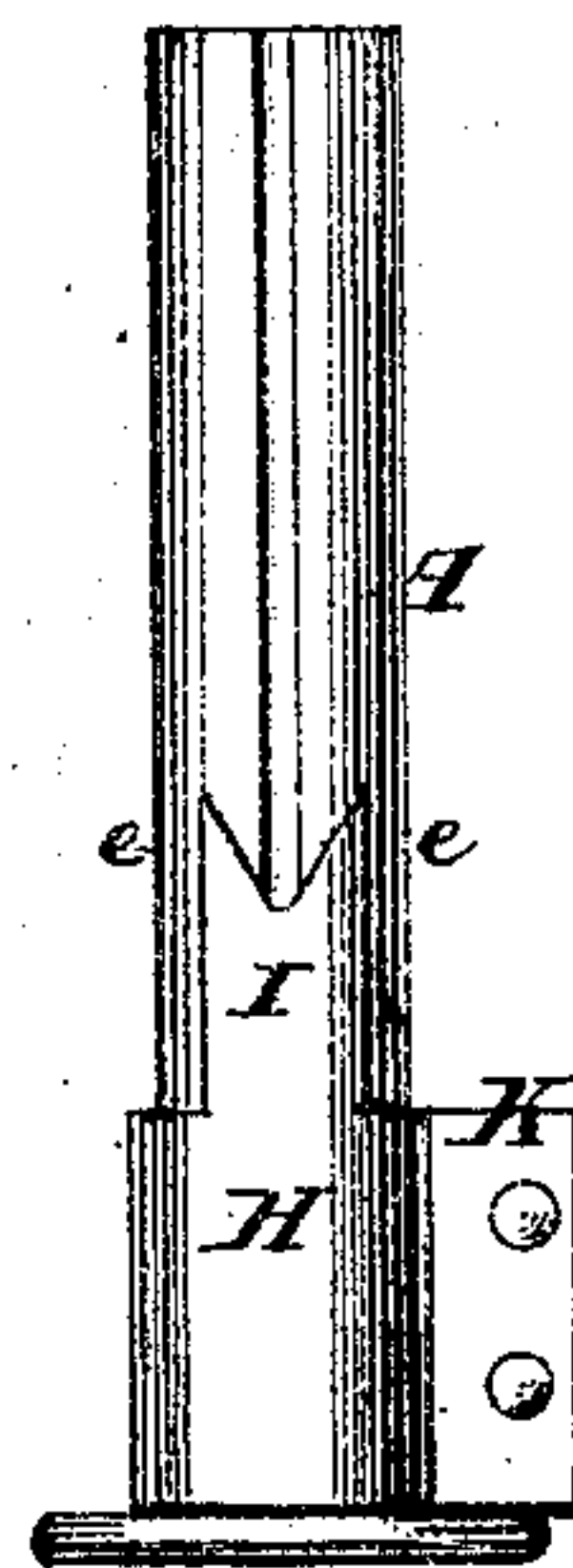


Fig. 2.

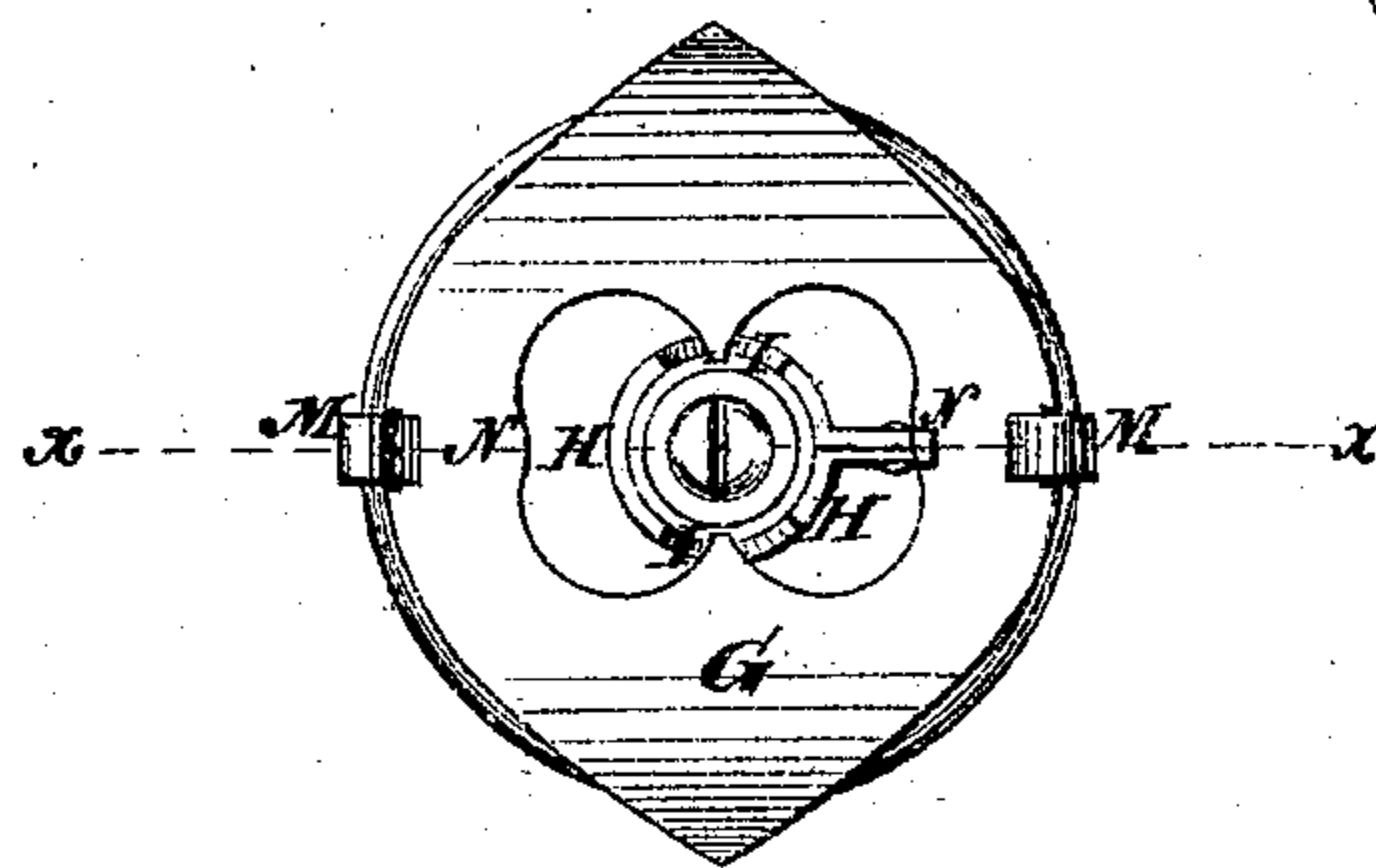
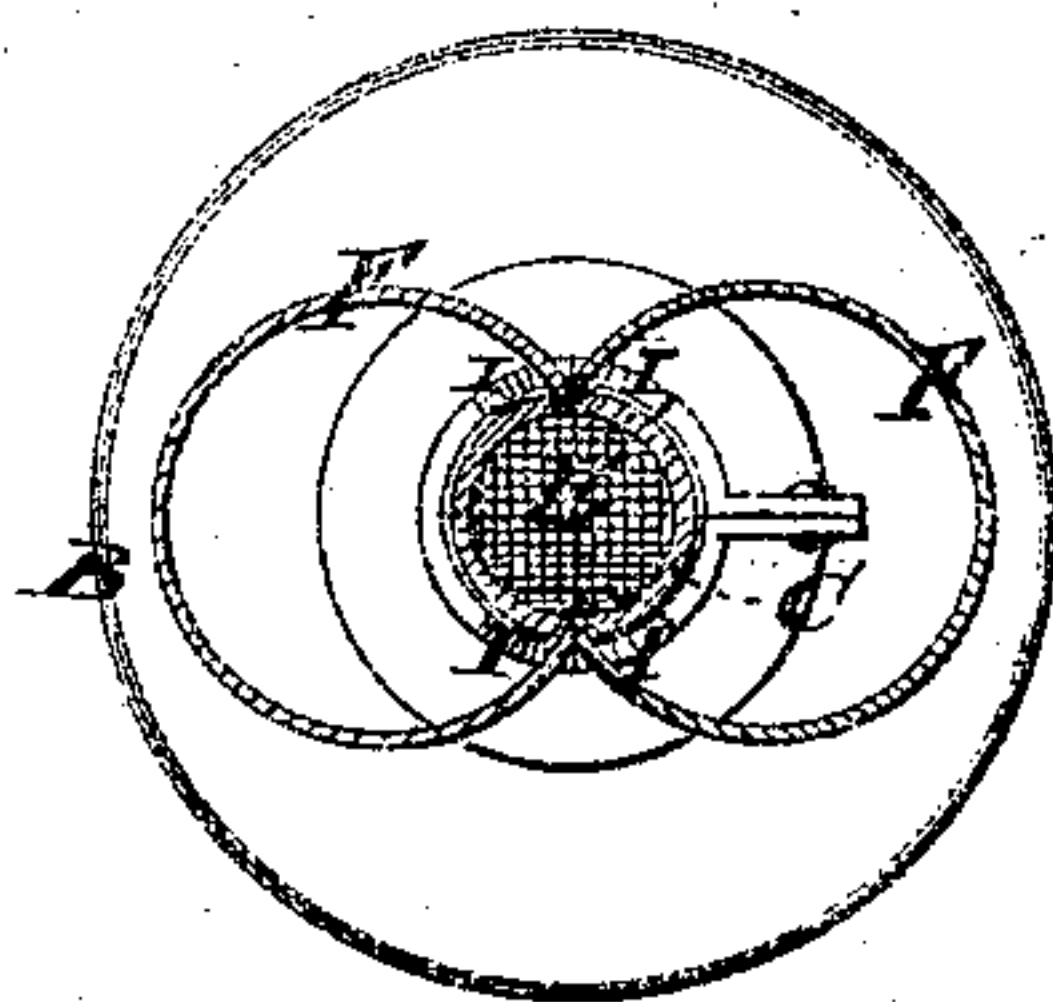


Fig. 3.



Witnesses:

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Inventor:

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UNITED STATES PATENT OFFICE

GEORGE H. WILSON, OF MANSFIELD, OHIO.

IMPROVEMENT IN VAPOR-BURNERS.

Specification forming part of Letters Patent No. 116,385, dated June 27, 1871.

To all whom it may concern:

Be it known that I, GEORGE H. WILSON, of Mansfield, in the county of Richland and State of Ohio, have invented a new and Improved Vapor-Burner; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification.

This invention relates to improvements in vapor-generating burners for oil-lamps; and it consists in the arrangement of heating and conducting-tubes for heating the oil and air, a flame-regulator, and a disintegrator for the oil, all as hereinafter described.

Figure 1 is a sectional elevation of the improved burner on the line *x x* of Fig. 2. Fig. 2 is a top view. Fig. 3 is a horizontal section of the burner on the line *y y* of Fig. 1, and Fig. 4 is a side elevation of the gas-generating and disintegrating device.

Similar letters of reference indicate corresponding parts.

A is a small cylindrical tube attached to the lamp-top B. C is another tube fitting on A snugly at the upper part so as to be adjusted up and down. The tube has a small hole, *e*, on each of two opposite sides above the top A, and above these is a quantity of sand, D, confined between two diaphragms, E, of perforated substance or gauze-wire. This sand packing extends nearly to the top of the tube C, and in the top of the latter is placed a lava-tip, E, or other burner. F represents a couple of large tubes or air-conductors of any kind attached to tube C, one on each of two opposite sides and over the holes *e*. G is a plate arranged on the top of tubes F and above the burner, with holes having enlargements H H at each side of the diameter for

checking or counteracting the current of the heated air rising up on each side of the flame, and causing it to flow more directly into it than would otherwise be the case. I represents curved plates rising up alongside of the tube C from a short tube or collar, H, for closing the holes *e* or opening them by turning forth and back, for which the tube has a thumb-piece, K. The vapor escaping from the holes *e*, either by the evaporation of oil in the lamp, by atmospheric temperature, or set in motion by a flame of a match or other lamp impinging on the tube C, being ignited, will heat the tube and the oil rising up in it, and cause it to vaporize and pass up through the sand D, which, besides serving to prevent the too rapid flow of vapor or oil, or the escape of the oil before vaporizing, also serves to facilitate the disintegrating and vaporizing of the particles. The flow is varied to a considerable extent by shifting the tube C up or down on the tube A. The plate G is, in this instance, held in position by the spring M, which admits of removing it readily. This plate covers the openings through the tubes at the sides opposite the flame, as indicated at N, and thereby causes the currents to be turned toward the flame.

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

The combination, with the lamp-tube A, of the adjustable tube C, sand packing D, hot-air tubes F, the plate N and a gas-burner, the tube C having the perforations *e*, and all arranged for operation substantially as specified.

The above specification of my invention signed by me this 25th day of March, 1871.

GEORGE H. WILSON.

Witnesses:

GEO. W. MABEE,
T. B. MOSHER.