

J. STRATTON.  
Hydrocarbon Burner.

No. 53,383.

Patented March 20, 1866.

FIG. 1.

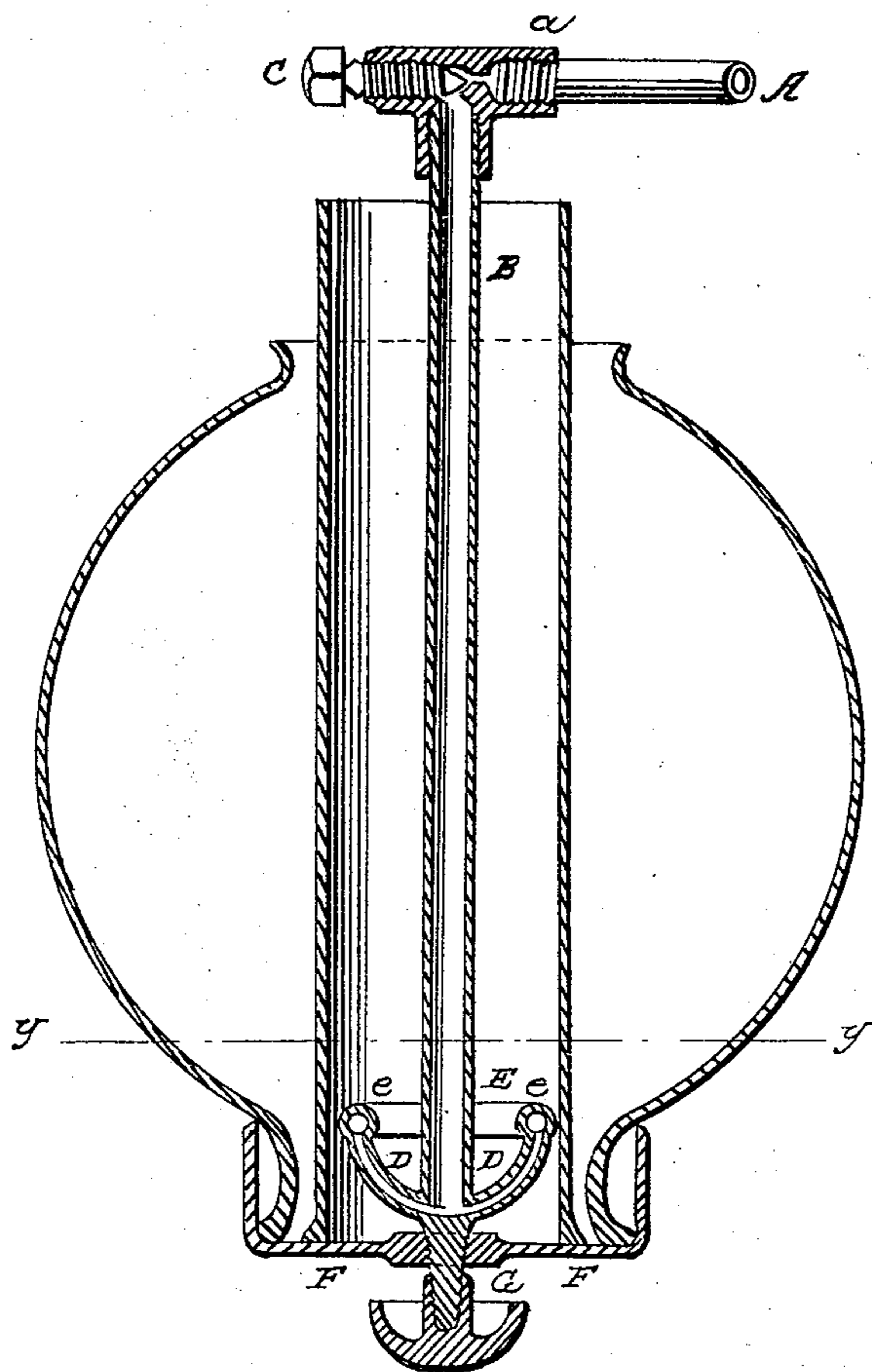
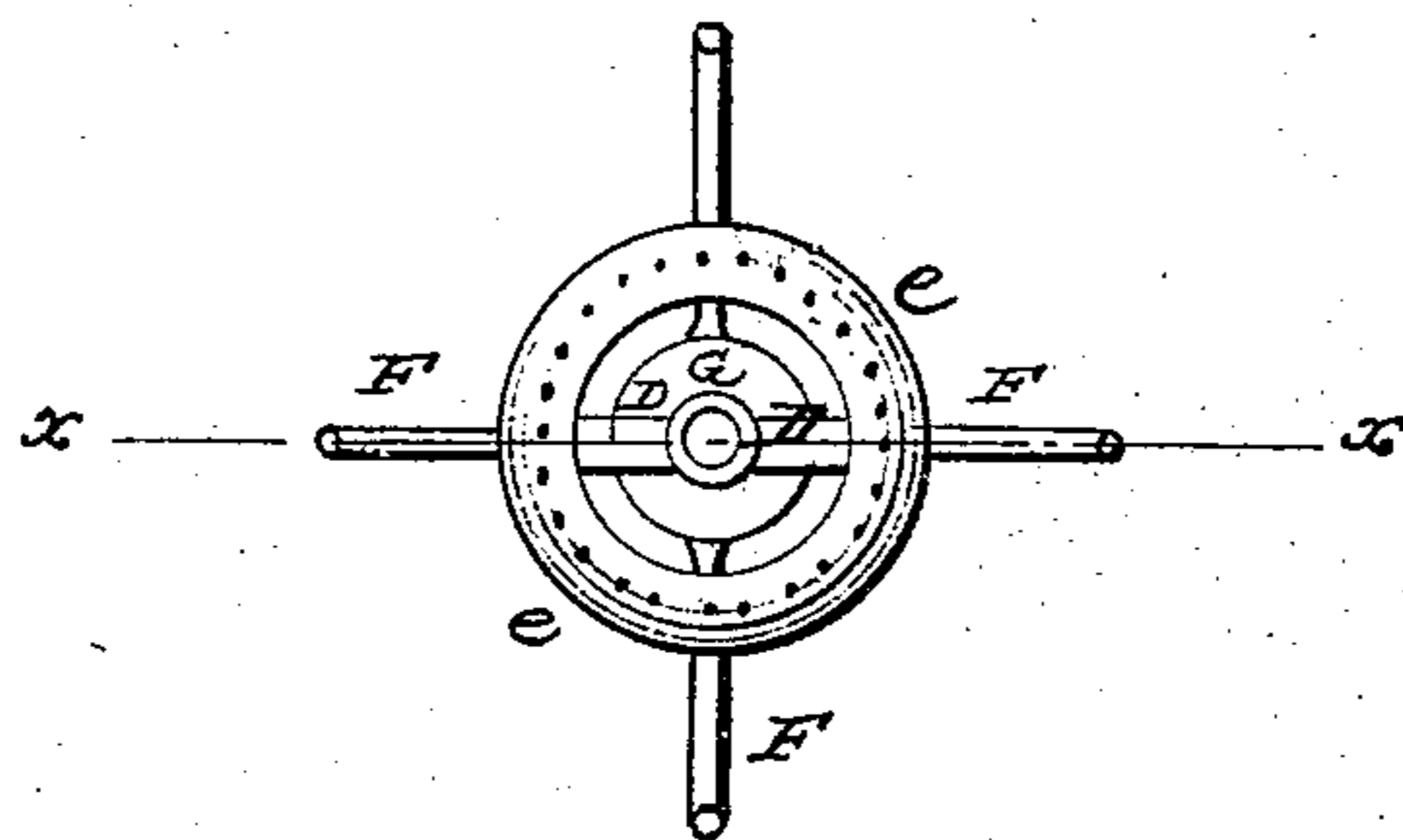


FIG. 2.



WITNESSES:

*John L. Erwin*  
*W. F. Hall*

INVENTOR.

*James Stratton*  
*By [Signature]*

# UNITED STATES PATENT OFFICE.

JAMES STRATTON, OF PHILADELPHIA, ASSIGNOR TO HIMSELF, G. G. EVANS,  
OF PHILADELPHIA, PA., AND D. W. RIDDLE, OF MANCHESTER, N. H.

## IMPROVEMENT IN HYDROCARBON-BURNERS.

Specification forming part of Letters Patent No. 53,383, dated March 20, 1866.

*To all whom it may concern:*

Be it known that I, JAMES STRATTON, of the city and county of Philadelphia, and State of Pennsylvania, have invented a new and Improved Hydrocarbon-Burner; and I do hereby declare the following to be a full, clear, and exact description of the nature, construction, and operation of the same, sufficient to enable one skilled in the art to which it appertains to construct and use the same, reference being had to the accompanying drawings, which are made part of this specification, and in which—

Figure 1 is a vertical section of a burner illustrating my invention at *x x*, Fig. 2. Fig. 2 is a horizontal section of the same at *y y*, Fig. 1.

Similar letters of reference indicate corresponding parts in the several figures.

The subject of my invention is a self-generating burner to be used with naphtha or other light hydrocarbon oils, for which purpose I employ a vertical supply-pipe descending from above, and when in operation surrounded or enveloped by a cylindrical or other hollow flame, which by heating the said supply-pipe generates gas from the hydrocarbon liquid descending therein.

In the accompanying drawings, A represents a supply-pipe leading from a reservoir located at a safe and convenient distance, and which may be protected by wire-gauze or other customary appliance, to prevent the possible communication of flame with its contents. B is the vertical supply-pipe forming part of my invention and communicating with the pipe A through an aperture, *a*, controlled by a cock or regulator, C, of any suitable construction. The lower end of the vertical pipe B

communicates with the hollow arms D D, which are here shown curving upward, but may be straight and horizontal, and should be four in number. From the hollow arms D the gas passes into a horizontal hollow ring, E, perforated with apertures *eee*, to produce a circular range of small jets uniting in a cylindrical flame on similar principle to the Argand gas-burner. The said flame surrounds the pipe B and communicates thereto the heat necessary to generate gas for its own supply. While I describe a cylindrical flame as the preferable form, it will be readily understood that it may, if preferred, be of square, elliptical, or other shape suitable to adapt it to surround or envelop the pipe B.

F F represent arms for supporting either a cylindrical or globular chimney. It is proposed to make the said arms with springs or knuckle-joints, which will adapt them to bend upward to allow the chimney to pass and then afford a rigid support thereto.

G is a cup, in which a small quantity of alcohol or other combustible matter may be burned to produce heat necessary to start the gas-jets when first lighted.

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

The supply-pipe B, when arranged, as herein described, to descend within the hollow flame produced by a burner, E, surrounding said supply-pipe.

JAMES STRATTON.

Witnesses:

G. G. EVANS,  
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