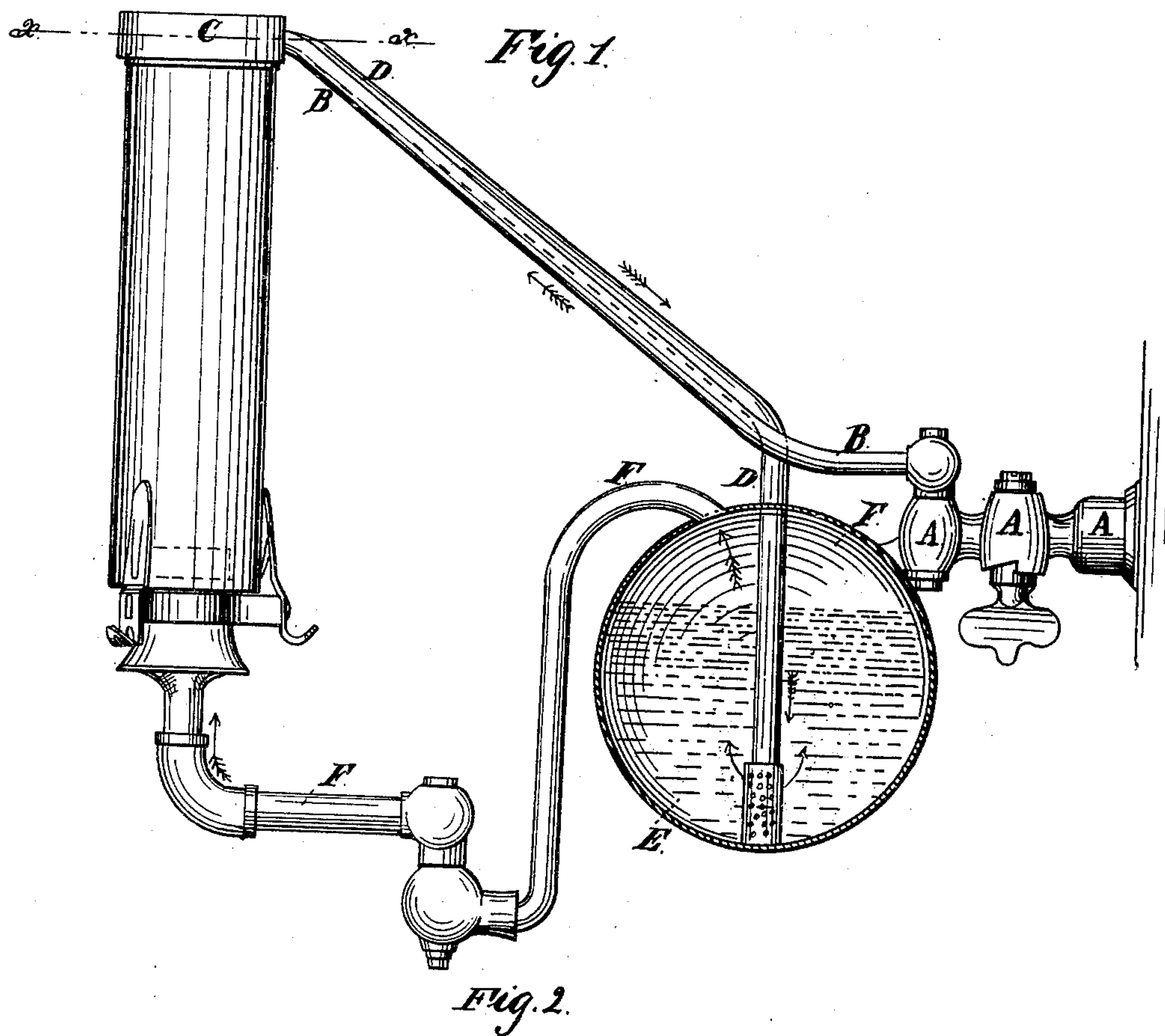


C. F. DUNDERDALE.
CARBURETER.

No. 90,436.

Patented May 25, 1869.



Witnesses
A. W. Almqvist
O. Hinchman

Inventor
C. F. Dunderdale
PER Munn & Co

United States Patent Office.

C. F. DUNDERDALE, OF NEW YORK, N. Y.

Letters Patent No. 90,436, dated May 25, 1869.

IMPROVED CARBURETTER

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, C. F. DUNDERDALE, of the city, county, and State of New York, have invented a new and useful Improvement in Carburetters; 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 drawings, forming part of this specification, in which—

Figure 1 is a side view, partly in section, of my improved carburetter attached to a side-wall gas-bracket.

Figure 2 is a detail sectional view of the heater, taken through the line *x x*, fig. 1.

Similar letters of reference indicate corresponding parts.

My invention has for its object to furnish an improved carburetter for attachment to brackets, chandeliers, pendants, or other gas-fixtures, and which shall be so constructed and arranged that the air to be carburetted may be heated by the flame which it is intended to feed; and

It consists in the construction and combination of the various parts of the apparatus, as hereinafter more fully described.

A, in the drawing, represents an ordinary side-wall bracket, to which is attached a tube, or pipe, B, leading upward and forward to a point directly over the burner for the hydrocarbon.

The upper end of the pipe B opens into a shallow vessel, C, the interior of which is so divided up by partitions as to force the air to pass through a long winding passage, as shown in fig. 2, so as to detain the air over the flame until it becomes thoroughly heated.

If desired, the heater C may be made in the form of a coil of pipe, its particular form being immaterial, so long as it is so constructed as to detain the air over the flame until it has been sufficiently heated.

From the heater C the heated air passes out through the short pipe D, which passes through the top of the small carburetting-vessel, or hydrocarbon-reservoir E, which is suspended from the bracket A, as shown in fig. 1, and which contains the hydrocarbon liquid with which the air is to be carburetted.

The lower end of the pipe D extends to the bottom

of the vessel E, and its lower part is perforated with numerous small holes, so that the air may escape into and rise through the hydrocarbon-liquid in small streams, causing it to be fully charged with hydrocarbon-vapor.

From the vessel E the carburetted air passes through the pipe F to the burner, where it is consumed in the ordinary manner.

The drawing represents an "argand" burner, but any kind of a burner may be used with equal advantage.

When an "argand" burner is used, the heater C should be placed close to the top of the chimney, so as to partially check the draught through said chimney, and detain the burning vapor until it has been fully consumed, thereby increasing the brilliancy of the flame.

The pipe F may be made jointed or not, as may be desired or convenient, according to the kind of burner used, and the particular construction of the apparatus.

A very great advantage of this apparatus is, that the heated and carburetted air passes through so short a space that it reaches the burner while still heated, and thus prevents the possibility of the pipes becoming clogged by the condensation of the hydrocarbon-vapor.

The air is forced through the ordinary gas-pipes by any of the ordinary air-pumps or blowers used for such purposes.

Having thus described my invention,

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

1. The combination of the pipe B, heater C, pipe D, carburetting-vessel E, and pipe F, to conduct the carburetted air to the burner, with each other and with an ordinary gas-fixture, substantially as herein shown and described, and for the purpose set forth.

2. An arrangement of mechanism, by means of which the air to be carburetted is heated by the flame which it is designed to feed, substantially as herein shown and described, and for the purpose set forth.

C. F. DUNDERDALE.

Witnesses:

ALEX. F. ROBERTS,
JAMES T. GRAHAM.