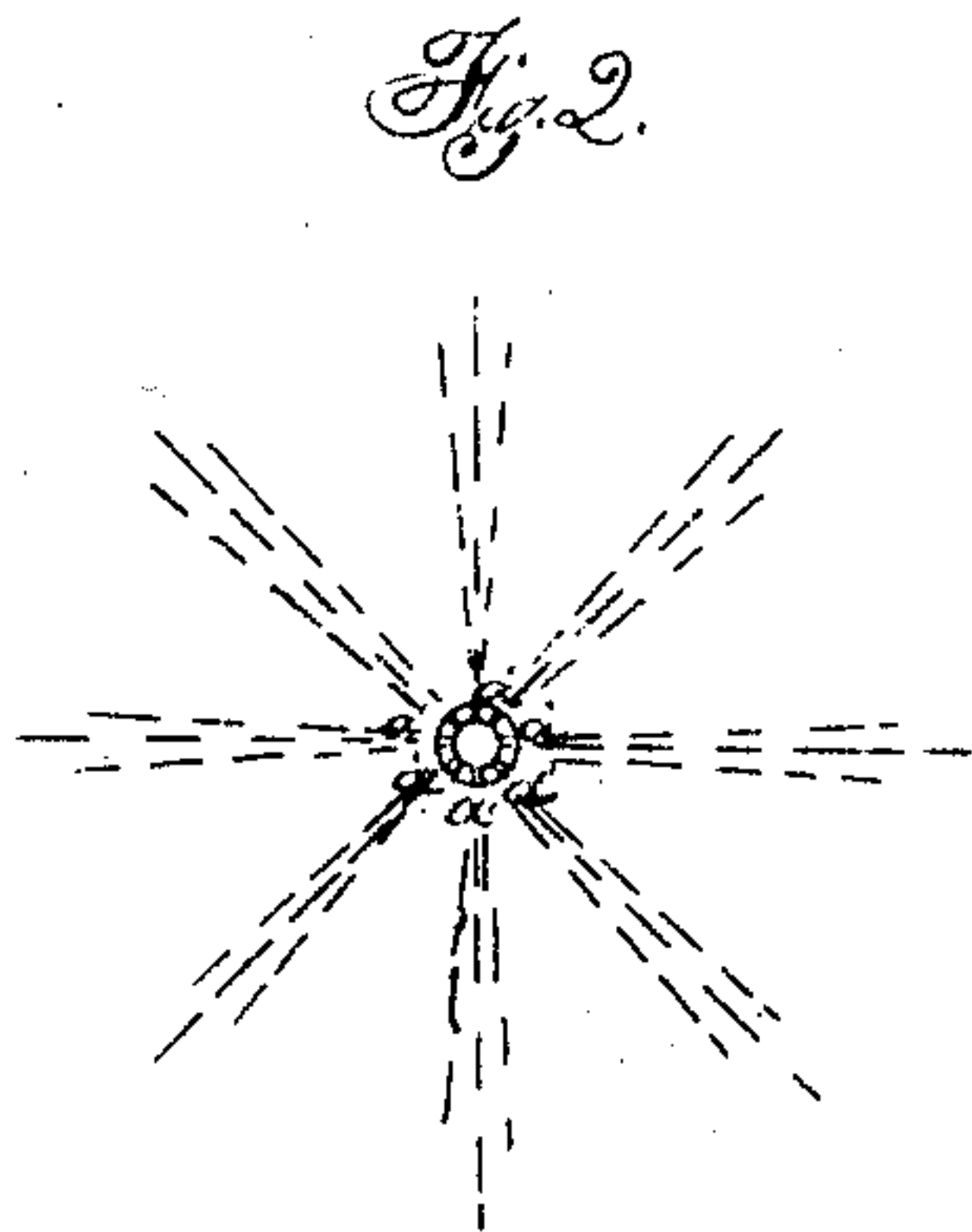
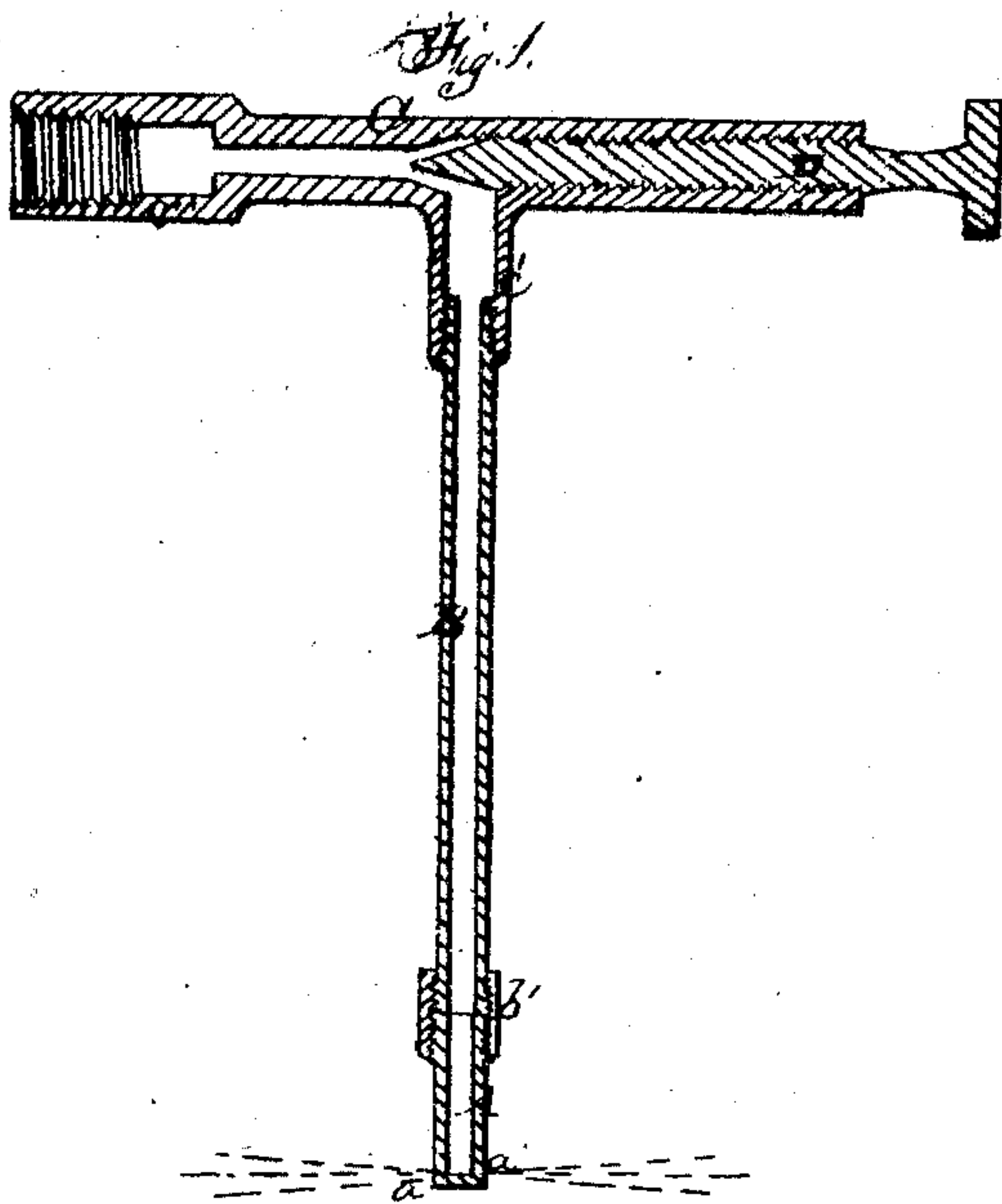


J. Stratton

Hydrocarbon-Burner.

N^o 76115

Patented Mar. 31, 1868.



Witnesses:

Benj Morrison
Wm H. Morrison

Inventor
James Stratton

United States Patent Office.

JAMES STRATTON, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO HIMSELF, WILLIAM WALLACE, AND ROBERT N. WETHERILL, OF SAME PLACE.

Letters Patent No. 76,115, dated March 31, 1868.

IMPROVEMENT IN HYDROCARBON-BURNERS.

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, JAMES STRATTON, of the city of Philadelphia, in the State of Pennsylvania, have invented a new and useful Improvement in the Hydrocarbon-Burner; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a vertical central section of the said improved burner, and

Figure 2 a horizontal section of the lower end of the same—

Like letters of reference indicating the same parts when in both figures.

Letters Patent, dated the 26th day of March, 1866, were granted to me and assignees for a certain "hydrocarbon-burner," in which the burner proper is annular, and the vertical supply-pipe passes down through its centre, and connects with the under side of the said burner; but the jets, being vertical, cast a shadow downward, and also require a chimney to prevent smoke.

The object of my present improvement is to obviate these objections, and also to afford an equally good burner at much less cost.

My invention consists substantially, as hereafter described, in so constructing the burner proper or lower end of the vertical supply-pipe, that the jets will proceed directly from the same, in horizontal radial directions.

Referring to the drawings, A is the burner proper; B, the vertical supply-pipe; C, a horizontal pipe leading to any suitable reservoir of the hydrocarbon, and D a stop-valve. The pipe C has a branch, *c'*, into which the upper end of the vertical pipe B is screwed. The vertical pipe B is made of brass, has a bore of about a sixteenth of an inch in diameter, and extends vertically downward about three inches, where it is attached by a screw-collar, *b'*, to the upper end of the burner proper, A, which is about three-fourths of an inch long, and of the same bore as pipe B, but is made of steel, and has its lower end closed, (see fig. 1.) Around this lower end there is a series of very minute horizontal holes, *a' a'*, at equal distances apart on the outside, and each hole leading therefrom directly toward the centre of the bore, through the sides of the pipe, and opening therein on a line with the inside bottom of the said pipe A, (see fig. 2.)

One end, *c''*, of the reservoir-pipe C is enlarged, and is screw-cut on its inner side, in the usual manner, so that it can be packed with any suitable straining or filtering-material, and attached to the usual reservoir. The opposite end of pipe C, extends an inch or two beyond its branch *c'*, is screw-cut around its inner side, and has within an accurately-fitting screw-stem, D, which has its inner end made conical, so that it will fit accurately in a corresponding enlargement, made a little beyond the branch *c'* of pipe C, and thus form a stop-valve, which can be readily opened or closed, as occasion may require.

Operation.

The pipe C being connected with a suitably elevated reservoir of the hydrocarbon, the screw-stem D is rotated backward sufficiently to allow the fluid to pass freely into pipe B and burner A, when a lighted match is applied, and consequently the fluid ignited at the jet-holes *a'*, causing a clear, bright flame to radiate from each of the said holes, (see fig. 2,) and when the burner A and pipe B become heated, the size of the flame and brilliancy of the light will be greatly increased, and without producing smoke or casting a shadow beneath the burner.

This burner is simple and inexpensive of construction, and is also most easily kept in order.

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

The downward-projecting straight burner A, its lower end so perforated that the jets will flow in horizontal radial directions, in combination with the vertical pipe B, the said parts being constructed and arranged to operate together, substantially as and for the purpose described.

JAMES STRATTON.

Witnesses:

BENJ. MORISON,

WM. H. MORISON.