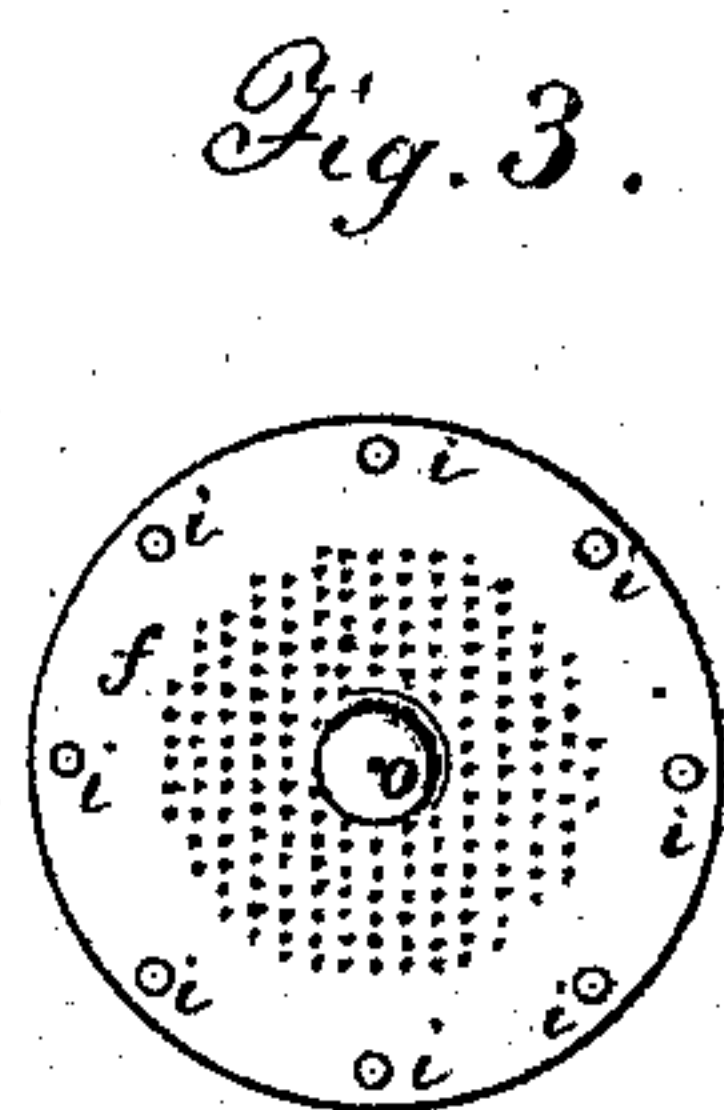
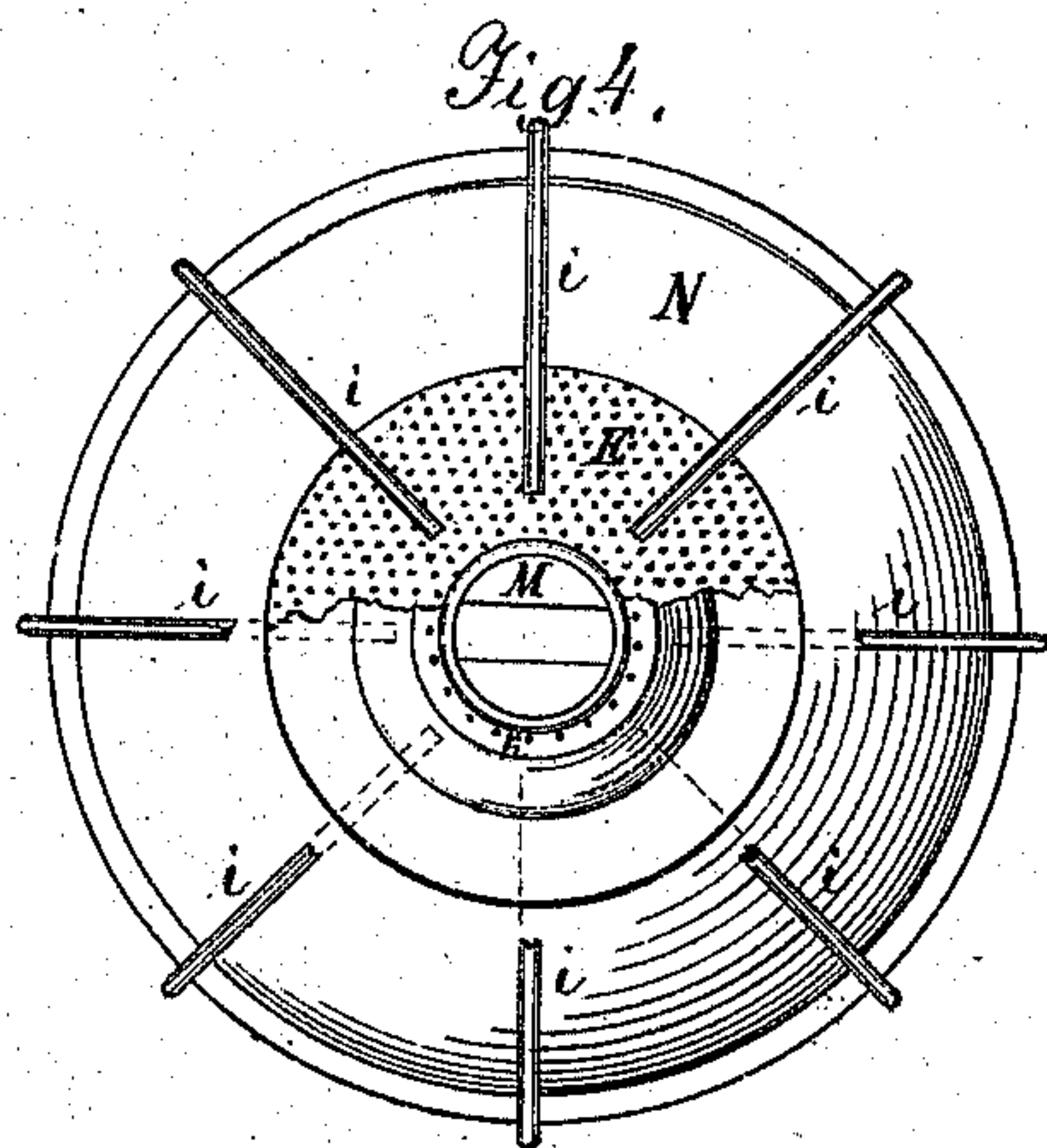
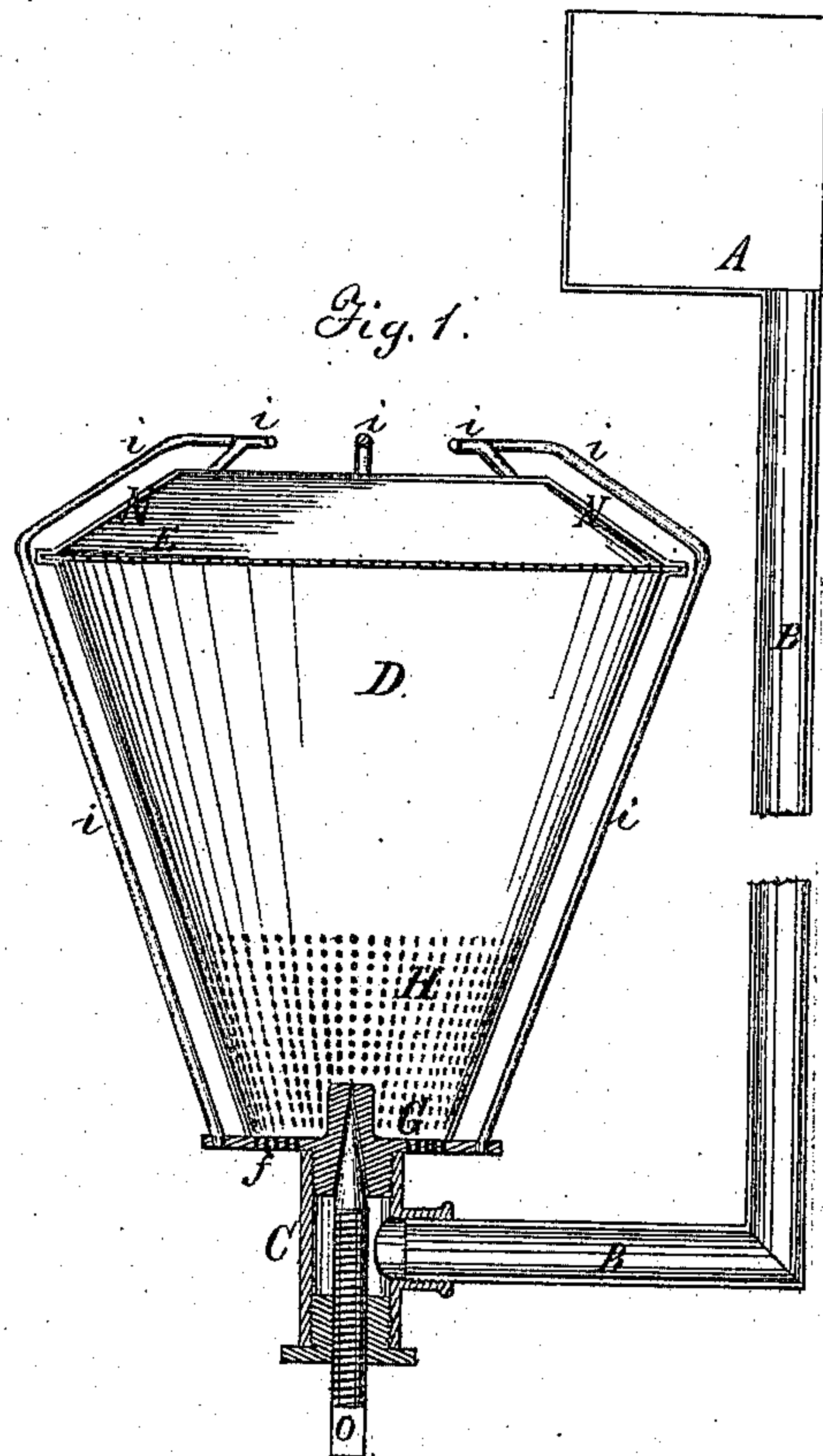
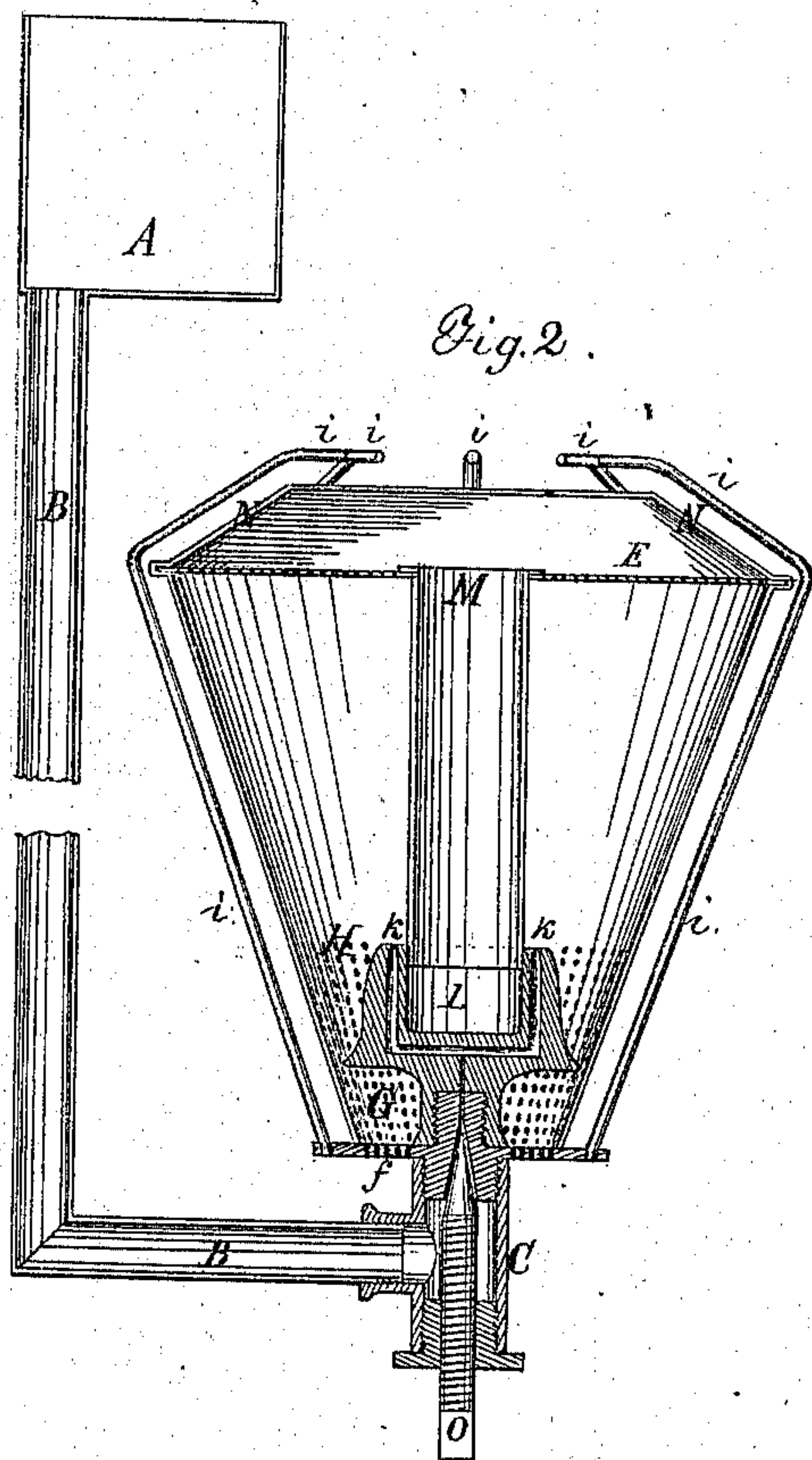


H. S. SARONI.

Vapor Burner

No. 100,807.

Patented March 15, 1870.



Witnesses
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United States Patent Office.

HERRMAN S. SARONI, OF BALTIMORE, MARYLAND.

Letters Patent No. 100,807, dated March 15, 1870.

VAPOR-BURNER FOR COOKING OR HEATING.

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, HERRMAN S. SARONI, of the city and county of Baltimore, and State of Maryland, have invented certain new and useful Improvements in Vapor-Burners, of which the following is a full, clear, and exact description.

First, my invention consists in a novel method of combining a foraminous diaphragm, on the surface of which the vapor is burned, with a mixing-chamber, the walls of which are partly foraminous, so as to allow the requisite quantity of atmospheric air to enter the mixing-chamber, while at the same time it prevents an ignition of the vapor inside the chamber. This chamber rests on a perforated disk, of copper or brass, which, constituting the generator, has attached to it a series of copper or brass rods, bending over the upper diaphragm, and forming effective heat-conductors to the generator.

Secondly, my invention further consists in a novel method of combining an Argand burner with a mixing-chamber, foraminous diaphragm, heat-conductors, and generator, which insures a much more perfect combustion of the vapor.

In the accompanying drawings which make part of this specification—

Figure 1 is a vertical section through my improved burner.

Figure 2 is a similar view of the Argand burner.

Figure 3 is a view of the perforated generating-disk, looking down upon it.

Figure 4 is a similar view of the Argand burner, showing part of the upper diaphragm and part of the distributing-chamber.

Petroleum or other analogous fluid is fed from a reservoir, A, through a pipe, B, to a generator, C f, where it is volatilized and whence it escapes in the form of vapor, into the mixing-chamber D, consisting, by preference, of an inverted frustum of a cone, provided with the foraminous diaphragm E, and resting on the perforated disk f.

As the vapor escapes through the valve O into the chamber D, air enters through the apertures of the disk f, and the foraminous part G H of the chamber D, becoming thoroughly mixed with the vapor.

The vapor, being ignited above the diaphragm E,

burns with an intense, clear, and steady heat, which, striking the conductors *i i i i*, communicates ample heat to the generator C f to keep up the volatilization of the fluid as it enters from the reservoir A.

In fig. 2 I have shown how the principle of the Argand burner may be adapted to my generator. The vapor in this case passes first into a distributing-chamber, K, from whence it passes either through an annular slot, or in minute jets into the mixing-chamber D, thus causing a more intimate mixture with the atmospheric air entering through the disk f and the foraminous part G H of the mixing-chamber D.

Connected with the distributing-chamber K is a tube, L M, admitting air at L and carrying it at M into the center of the flame, still more promotes the perfect combustion of the vapor. The construction of the generator C f and the conductors *i i i i* is the same as in fig. 1.

A conical ring, N N, may be placed above the diaphragm E to concentrate the flame in either form of burner.

Now, while I do not broadly claim the use of a foraminous diaphragm, nor of conductors of heat, nor of a mixing-chamber,

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

1. The perforated disk of the generator C f, substantially as set forth.

2. The combination of a foraminous diaphragm, on the surface of which the combustion is effected, with a mixing-chamber of either solid or partly foraminous walls, surrounded by a series of conductors, and a generator with perforated disk to which these conductors are attached, substantially as set forth.

3. The combination of a foraminous diaphragm with a mixing-chamber, having an air-tube in the center, and a generator with a distributing-chamber, through which the vapor passes, either in minute jets or through an annular opening into the mixing-chamber, substantially as set forth.

In testimony whereof I have hereunto set my name.

HERRMAN S. SARONI.

Witnesses:

J. P. THEODORE LANG,
FRED. ARTÓs.