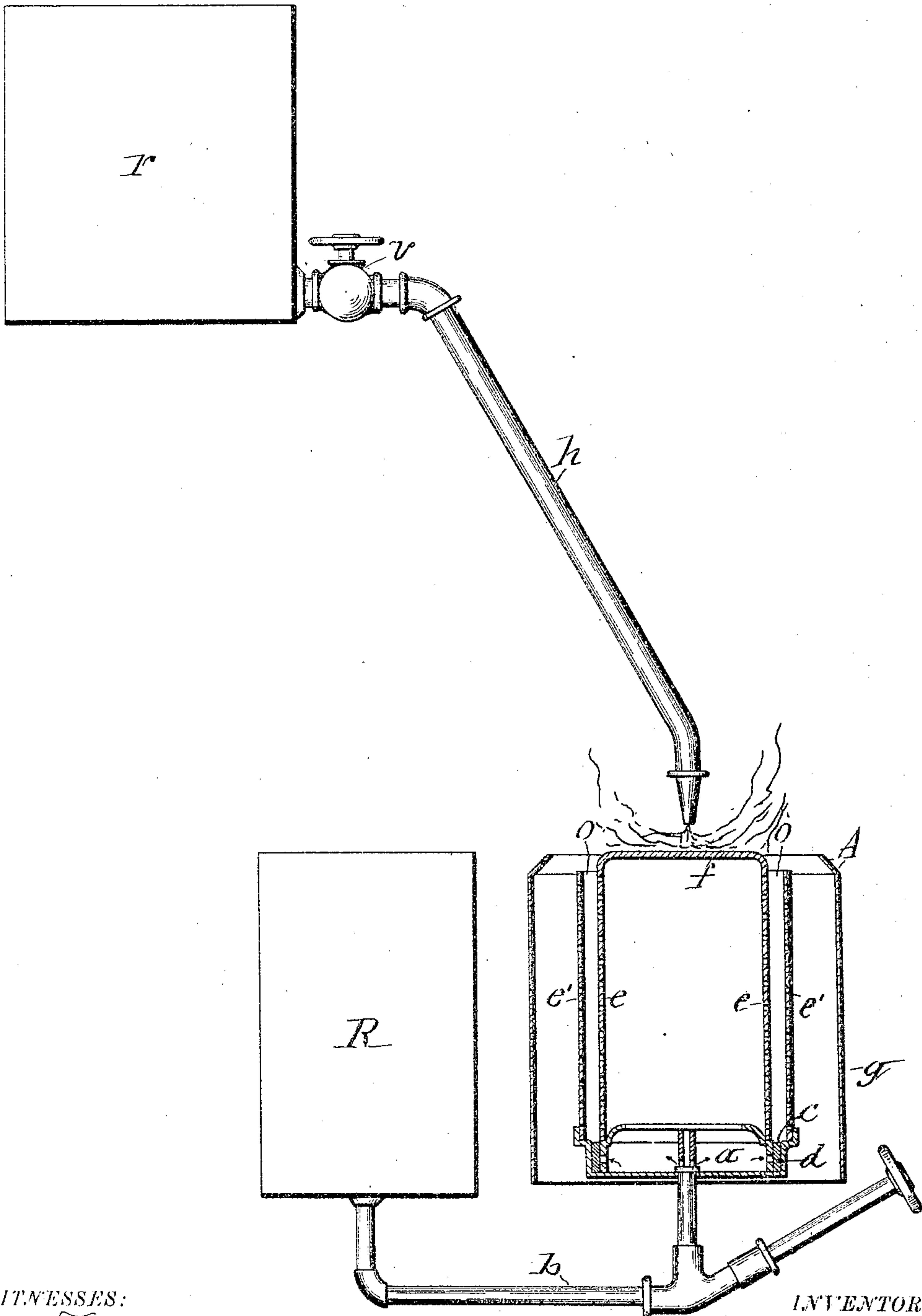


No. 774,447.

PATENTED NOV. 8, 1904.

S. S. MUTH.
APPARATUS FOR BURNING WATER.
APPLICATION FILED JAN. 18, 1904.

NO MODEL.



WITNESSES:

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SARAH S. MUTH, OF SYRACUSE, NEW YORK.

APPARATUS FOR BURNING WATER.

SPECIFICATION forming part of Letters Patent No. 774,447, dated November 8, 1904.

Application filed January 18, 1904. Serial No. 189,453. (No model.)

To all whom it may concern:

Be it known that I, SARAH S. MUTH, of Syracuse, in the county of Onondaga, in the State of New York, have invented new and useful improvements in Apparatus for Burning Water, of which the following, taken in connection with the accompanying drawing, is a full, clear, and exact description.

The object of this invention is to convert water into an inflammable vapor or gas capable of producing a flame of intense heat and brilliant light; and to that end the invention consists in the novel construction and combination of the component parts of the burner, as hereinafter described and claimed.

My said invention is susceptible of many modifications in the details of the apparatus, and I therefore do not limit myself to the precise construction illustrated in the annexed drawing, in which A represents a vertical transverse section of one of the class of oil-burners now in the market. The said burner, briefly described, consists of the pan *a*, which is supplied with oil from a pipe *b*, attached to an oil-reservoir R. In an annular trough *c*, surrounding the said pan, is an asbestos band or suitable wick *d*, supplied with oil from the pan *a*, the wall of which is perforated for that purpose. From the trough *c* rise two perforated cylinders *e e'*, forming a cylindrical passage *o* between them. The flame from the wick *d* ascends in the space *o* and is supplied with oxygen admitted through the perfora-

tions of the cylinders, by which it is heated. The top of the inner cylinder *e* is closed by a water heating or vaporizing plate or cap *f* to compel the air which enters through the open bottom of the cylinder to pass out through the perforated sides of the cylinder.

g denotes a casing which surrounds the outer cylinder *e'*. The flame issues from the top of the cylindrical space *o*, which constitutes the flame-carrier surrounding and heating the plate *f*. In this style of burner I apply the water to the heated cap *f* by means of a pipe *h*, leading from a reservoir *r* or other suitable source and provided with a suitable valve *v* for gaging the flow of water through the said pipe, so as to apply the water to the burner A gradually and in predetermined quantities.

The water applied to the heated cap *f* becomes vaporized and is diffused through the flame of the burner, and thereby produces a flame of great brilliancy and intense heat.

What I claim as my invention is—

A burner comprising a burner-trough, inner and outer cylinders forming a flame-carrier space between them, and a water-vaporizing plate disposed to be heated by the flame, in combination with a water-supplying duct disposed and gaged to apply water gradually to the said vaporizing-plate as set forth.

SARAH S. MUTH. [L. S.]

Witnesses:

J. J. LAASS,

G. VAN VORST.