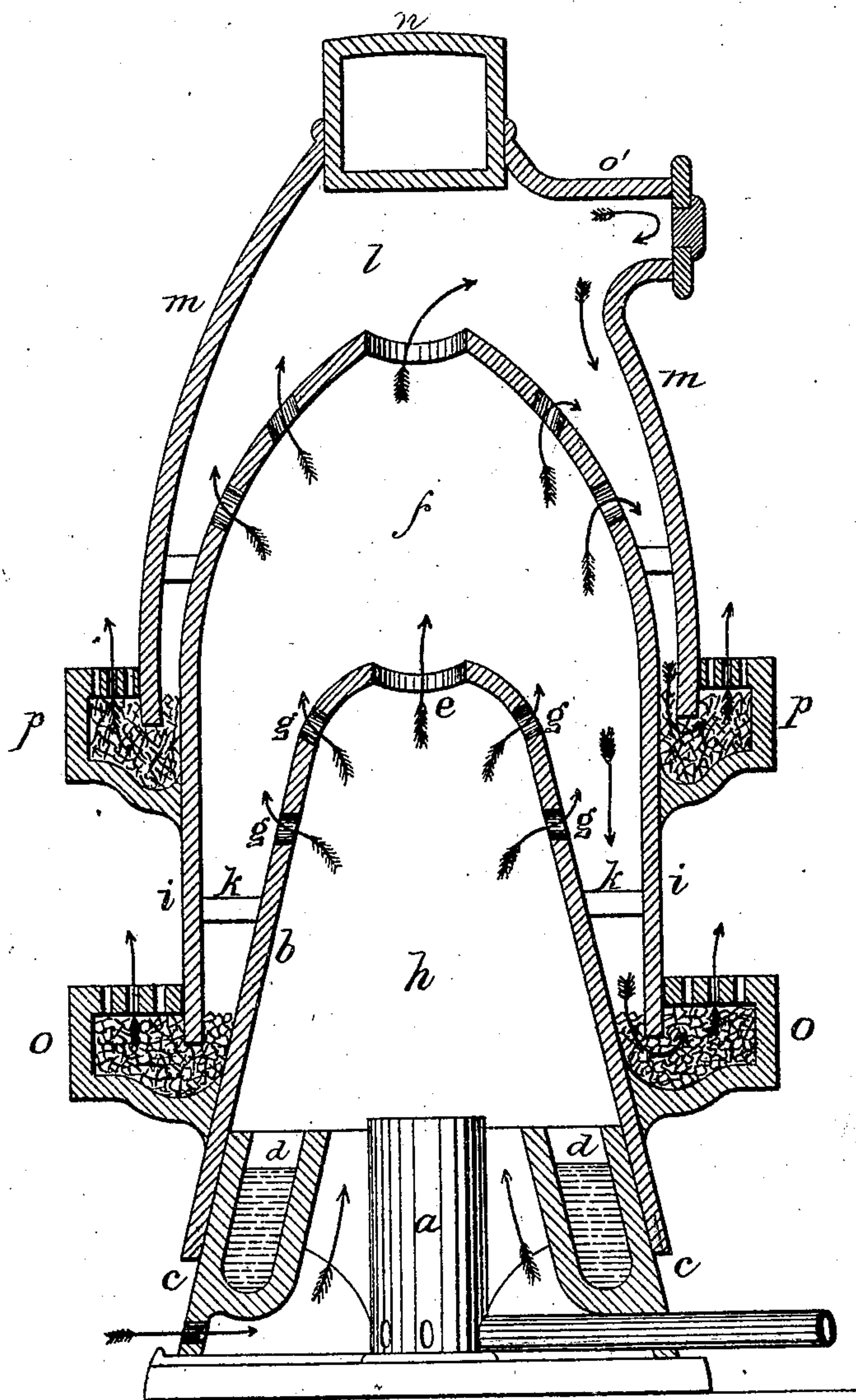


WILLIAM HENRY TAYLOR.

Gas Stove.

No. 124,097.

Patented Feb. 27, 1872.



Witnesses.

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UNITED STATES PATENT OFFICE.

WILLIAM HENRY TAYLER, OF SURRY, ENGLAND.

IMPROVEMENT IN GAS-STOVES.

Specification forming part of Letters Patent No. 124,097, dated February 27, 1872.

To all whom it may concern:

Be it known that I, WILLIAM HENRY TAYLER, of Surry, England, have invented certain Improvements in Gas-Stoves, &c.; and I do hereby declare that the following, taken in connection with the drawing which accompanies and forms part of this specification, is a description of my invention sufficient to enable those skilled in the art to practice it.

My invention relates to the construction of gas-stoves with reference to provision for preserving the purity of the air of rooms in which such stoves are used, the unpleasant odors and deleterious gases, &c., emanating therefrom being purified, destroyed, or removed.

To make a stove for general heating purposes, I prefer to construct it of a conical or cylindrical form and of any suitable materials, and with two or more chambers arranged in a vertical series, one above the other, the chambers being formed as open ended conic frustums supported one upon the other above the lower one, and so as not to close their ends. The lower part of each chamber thus formed communicates with the surrounding air through a porous medium suitable to disinfect the heated air from the gaseous or volatile products of combustion, the base rims of the frustum, except the lower one, being placed in troughs attached to or forming part of the conic frustum, which troughs are filled with the proper porous medium. The unconsumed carbon is deposited on the surfaces of the conic frustums, and is also caught and detained in the material placed in the troughs, which material may be changed as needed, and the cones may be cleansed from time to time.

On the inside of, or below, the first and lower chamber of the stove there may be a boiler for containing water, the steam from which supplies moisture to the air circulating through the stove. The top of the boiler or water-evaporator is preferably about level with the gas-burner, to which numerous holes in the base of the stove admit air needed for combustion.

The top, opening in the upper conic frustum, may be fitted with a removable water-evaporator, and it may also have an opening to receive a pipe suited to lead off the volatile pro-

ducts of combustion, and said opening or pipe may be provided with a cover or damper, by which passage of said products may be controlled.

I do not confine myself to any particular form of burner, but I prefer either a perforated porcelain cylinder with a fire-clay disk for deposition and consumption of carbon, or a Bunsen's burner with disk allowing a ring of jets with fire-clay disk, as just described.

It will be seen that, owing to the free ingress of fresh air to the body of the stove and to the ventilation between one chamber and another, with the evaporation from the boiler the air inside the stove is prevented from becoming overheated, and that the carbon, which is not consumed, is deposited. It will also be seen that, as all products of combustion and the heated air may be compelled to pass, before mixing with the external atmosphere, over and through the purifying substance or substances contained in the troughs described, they are thus freed from all obnoxious matters.

In the drawing, which is a vertical central section of a gas-burning stove for general heating purposes, and embodying my invention, *b* is the first cone, supported upon a base, *c*, in which is formed the boiler or water-evaporator *d*. The upper end of cone *b* leads, by an opening, *e*, into the next chamber *f*. Lateral openings *g* form the chamber *h*, also extending through the cone *b* into the chamber *f*. The chamber *f* is formed by cone *i* surrounding cone *b*, it being supported upon cone *b* by projections *k*. Above cone *i* is shown another chamber, *l*, into which the top and sides of cone *i* extend, said chamber being formed by cone *m*, which is supported upon cone *i* in the same way that cone *i* is supported upon cone *b* and having substantially the same relation thereunto.

The top of the upper cone may be surmounted by a cover or water-evaporator, *n*. The circulating currents of air are denoted by the arrows on the drawing, and a burner for the gas is marked *a*. The troughs *o p*, in which the lower edges of the conic frustums *i m* are entered, are charged with lime or other suitable absorbent or purifier, so that, when the pipe *o'* is closed or partly closed, all or a por-

tion of the circulation must be through the contents of the troughs.

I claim—

A gas-burning stove for heating, made with chambers relatively arranged, as described, when the lower edges of the cones forming the chambers enter troughs fitted to contain suitable absorbent or purifying material.

2. Also, a stove, as before claimed, when made with the water-evaporator *d*, as described.
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Witnessed by—

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