

Gas-Stoves.

Patented March 3, 1874.

Fig: 1.

**Inventor:**

Inventor:
C. Witteck
W. G. Steinmetz
Per *mm*
Attorneys.

UNITED STATES PATENT OFFICE.

CHARLES WITTECK AND WILLIAM G. STEINMETZ, OF NEW YORK, N. Y.

IMPROVEMENT IN GAS-STOVES.

Specification forming part of Letters Patent No. 148,158, dated March 3, 1874; application filed September 20, 1873.

To all whom it may concern:

Be it known that we, CHARLES WITTECK and WILLIAM G. STEINMETZ, of New York, in the county of New York and State of New York, have invented a new and Improved Gas-Stove, of which the following is a specification:

In the accompanying drawing, Figure 1 represents a vertical section of our improved gas-stove on the line *c c* of Fig. 2; Fig. 2, a horizontal section on the line *x x*, Fig. 1; and Fig. 3, a bottom view of the same.

Similar letters of reference indicate corresponding parts.

The object of our invention is to furnish for heating and cooking purposes an improved gas-stove, which is constructed in a neat and durable manner, lighted and regulated rapidly and conveniently, and operated more economically than the common coal-stoves, besides being more advantageous for various applications.

A in the drawing represents the base part of the gas-stove; B, the draft-passages, arranged above the same. The base A is supported by legs *a*, of sufficient height to admit the lighting of the burners. The shape of the stove may be square, round, oval, or otherwise, as preferred, and the casing around the draft-passages be arranged in any suitable manner and ornamentation. The gas is introduced to pipes *b* of the base part A by connecting them, by a rubber or other pipe, with the main supply-pipe, in the usual manner. A principal faucet or stop-cock regulates the admission of gas, as required. Any number of burners, *e*, may be used in part A; but we prefer to use, for ordinary purposes, four, which are placed vertically on the connecting-pipes *b*, near the walls of part A. The burners usually employed for heating purposes may be used. The burner *e* nearest the supply-pipe is intended to produce the main draft through the passages B, and is, therefore, allowed to burn continually with a full supply of gas, while the supply of the other burners *e* is regulated, according to circumstances, by a stop-cock, *f*, operated by a crank, *f*¹, and connecting-rod *f*², with button *g*, from the outside of part A, as indicated in Fig. 3. The

temperature of the room may in this manner be fully and completely controlled, avoiding as well an oppressive degree of heat at one time as an insufficient degree at other times. A horizontal partition-plate, C, separates the lower part of base A from the upper part, which forms with the top plate the combustion-chamber D. The partition C is vertically adjustable in slots *h* of base A by means of extension-lugs *h*¹, together with washers and set-screws *h*². The admission of air to the combustion-chamber D is accomplished through the perforations or slots *i*, which are arranged along the upper part of base A. The quantity of air required for the full combustion of the gas is regulated by the higher or lower position of partition C, by which the slots *i* are partially opened or closed. The burners *e* connect with the combustion-chamber D by pipes *l*, which pass through partition C, and slide easily on the burner-tubes, together with partition-plates C. Pipes *l* open into metallic extension-burners E, which extend along the side walls of base A, and air-slots *i* being provided with narrow slots *l'*, through which the blue heating flames of the gas are issuing. By preference, we make the extension-burner E of the main draft-burner *e* of flat diamond shape, as may be seen in Fig. 2, while the extensions E of the other burners are of prismatic shape, as indicated in Fig. 1. A larger air-hole, *i'*, is arranged in base A, for the admission of a stronger current to the larger casing E of the main burner *e*. The series of draft-passages B is connected to the base A by strong supporting bars or feet *m*, to which are attached the vertical rods *m'*. The combustion-chamber D connects, at that side opposite to the main burner, by a vertical passage, with a horizontal one, then at the opposite side with the next vertical passage to the second horizontal passage, &c., to the chimney, as indicated in Fig. 1, the draft being indicated by arrows. The vertical rods *m'* connect and support the draft-passages B, forming the pillars of the stove. The horizontal passages may be advantageously used for cooking, baking, frying, warming, and drying purposes, according to their distance from the combustion-chamber.

Having thus described our invention, we claim as new and desire to secure by Letters Patent—

1. A gas-stove consisting of base A, gas-supply *b*, burner *e*, and combustion-chamber D, provided with draft-passages B, as set forth.

2. The base part A, in combination with adjustable partition C, to regulate size of combustion-chamber D and admission of air, as set forth.

3. The combination of burners *e* with sliding extension-burners *l* E and air-slots *i* of base A, to produce perfect combustion of the gas, as described.

CHARLES WITTECK.

WILLIAM G. STEINMETZ.

Witnesses:

M. T. DAVIDSON,

ERNEST W. GREIS.