

(No Model.)

W. L. CORT.
GAS STOVE BURNER.

No. 441,537.

Patented Nov. 25, 1890.

Fig. 1.

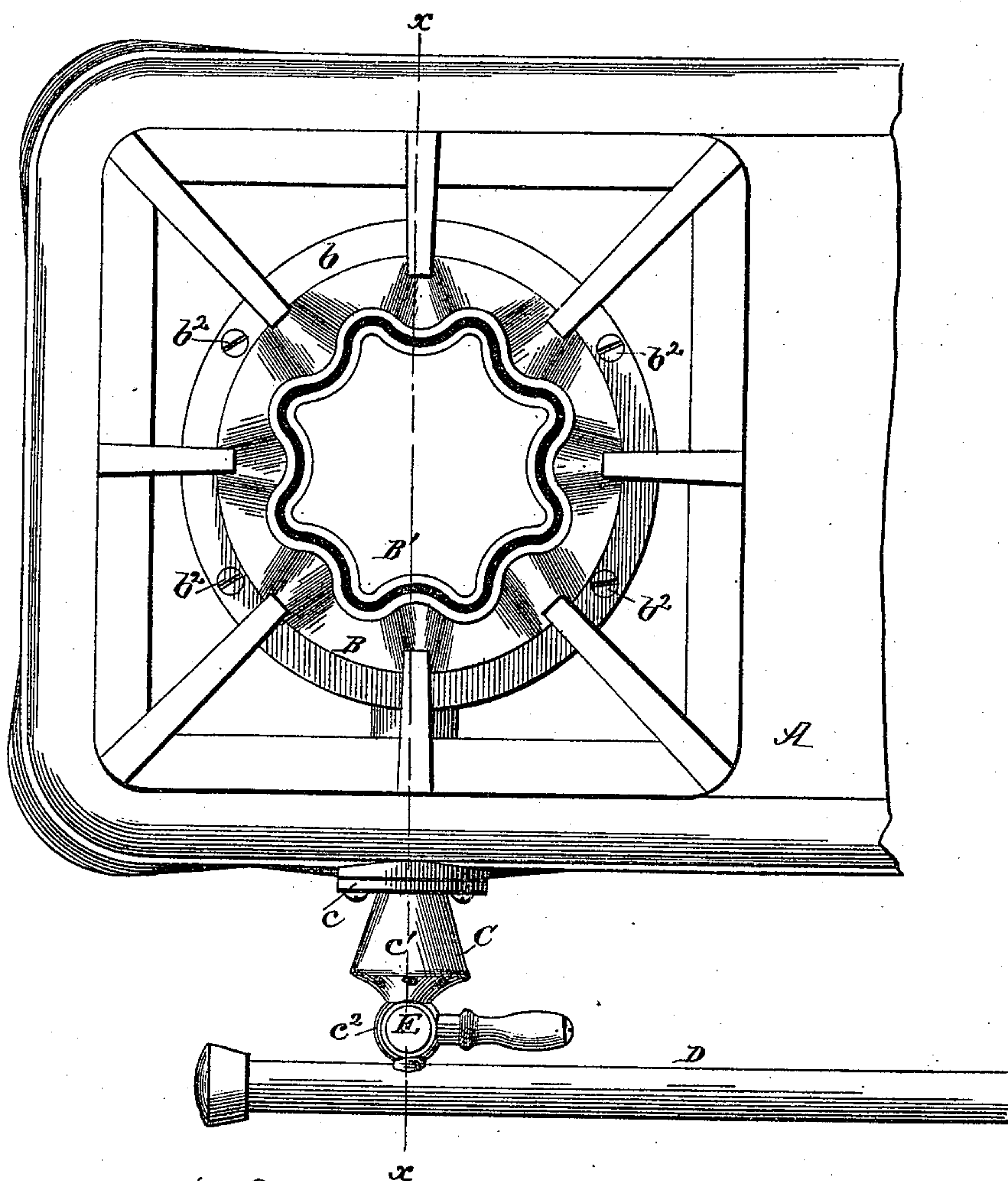
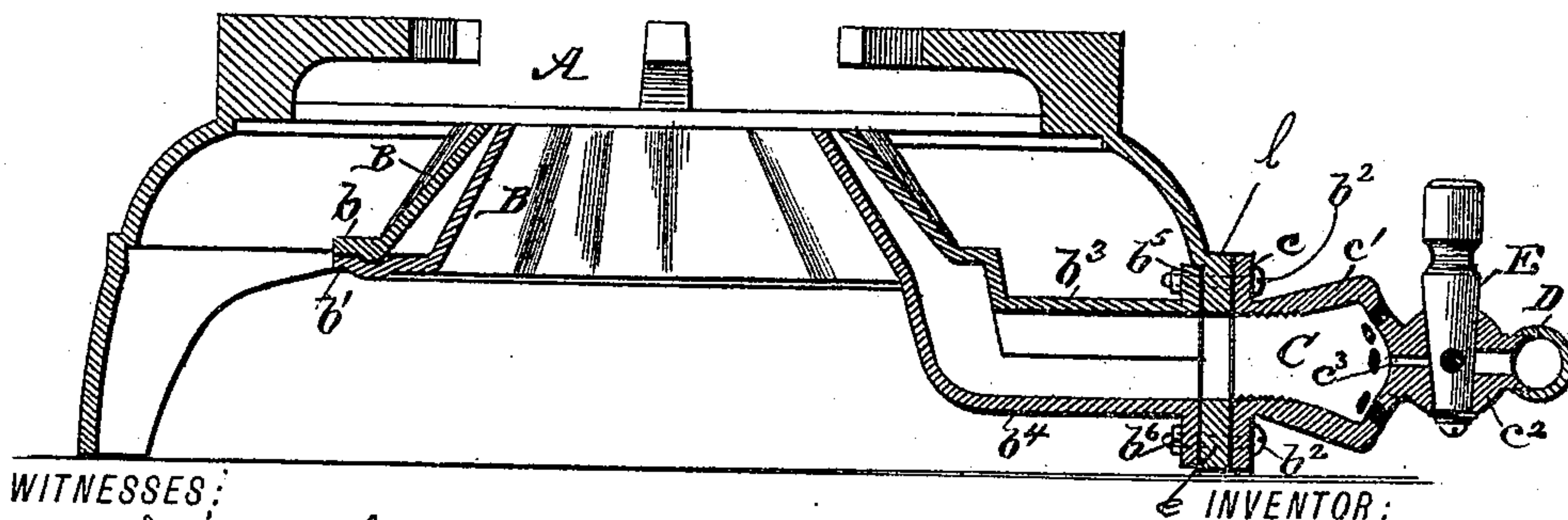


Fig. 2.



WITNESSES:

Fred G. Dieterich
Edw. W. Byrn.

INVENTOR:

Warren L. Cort.
BY *Wm. L. Cort*

ATTORNEYS

UNITED STATES PATENT OFFICE.

WARREN L. CORT, OF BROOKLYN, NEW YORK.

GAS-STOVE BURNER.

SPECIFICATION forming part of Letters Patent No. 441,537, dated November 25, 1890.

Application filed July 12, 1890. Serial No. 358,586. (No model.)

To all whom it may concern:

Be it known that I, WARREN L. CORT, of Brooklyn, in the county of Kings and State of New York, have invented a new and useful Improvement in Gas-Stove Burners, of which the following is a specification.

The object of my invention is to provide a burner for gas-stoves which shall secure the most complete combustion and the most intense heat without clogging or smoking, and which shall also be of a simple and cheap construction.

It consists in the peculiar construction and arrangement of a burner formed of two plates screwed or bolted together and having upwardly - extending and inwardly - inclined waved edges, whereby a large amount of flame area is obtained in a given circle.

It also consists in the peculiar construction and arrangement of parts, as hereinafter fully described.

Figure 1 is a plan view of a portion of a gas-stove, showing one of the burners thereof; and Fig. 2 is a vertical section thereof through the line xx .

In the drawings, A represents the supporting-frame of the gas-stove; B B', the burner; C, the mixing-chamber for air and gas, and D the inlet-pipe for the gas.

The burner is composed of two annular plates of metal having horizontal flanges $b b'$ at their lower edges, which have tongue-and-groove connections and bolts or screws b^2 for clamping them together. This tongue-and-groove connection, with a suitable packing of asbestos and a luting or cement at the joint of the two plates, forms a perfectly-tight joint all around the burner that prevents the escape of the gas. The burner-plates B B' extend upwardly and inwardly toward the center, and their upper edges are waved and form a continuous waved escape-orifice of general circular form, through which the air and gas issue and burn. At one side the two annular sections B B' are formed with halves $b^3 b^4$ of a pipe-section, which are bolted together similar to plates B B' and terminate in flanges $b^5 b^6$, which fit against a perforated lip or skirt e of the main frame and are bolted through to a flange c of the mixing-chamber C on the outside of the main frame, the joints being ground and made tight by a packing

of asbestos and cement. This mixing-chamber is formed with a swelled portion c' , formed in one and the same piece with the plug-casing c^2 of the stop-cock E. The mixing-chamber has holes formed on one side of its swelled portion c' to admit air, which becomes mingled with the gas issuing from a central nozzle c^3 , the flow of which gas is regulated by the stop-cock.

The operation of my burner is as follows: The air and gas commingled in proper proportions for complete combustion pass to the space between the two plates B B' of the burner, and, filling this annular space, the mixture rises and issues in a waved sheet at the top of the burner, which burns with a waved flame in which a large zone of green exists, and no unconsumed carbon is formed, thus indicating perfect combustion, intense heat, and a very great area of flame-surface within a given compass.

The advantages of this form of burner are that the commingled air and gas ascend toward the point of escape with a rapid motion unretarded by overhanging obstruction, and at the same time the waved slit or annular orifice gives increased clearance for the issuing gas and an increased area of flame, which tends to greatly stimulate the activity of combustion and the generation of heat without deposition of carbon.

With reference to the inward inclination of the waved walls of the burner I would state that while it admits of a large burner-chamber and a large clearance for the escape of gas this inward inclination brings a large amount of flame within a comparatively small circle, concentrating and intensifying the heat beneath the comparatively small bottom of a pot or kettle. Furthermore, this inward inclination permits the outer plate to be fitted down upon the inner one, so as to regulate the size of the escape-orifice for the gas by merely putting in more or less packing between the flanges of the plates.

Having thus described my invention, what I claim as new is—

1. A gas-burner of annular form with inwardly-inclined walls and having at its upper edge a continuous slitted escape-orifice of a waved form, substantially as shown and described.

2. A gas-burner consisting of an upper plate B and lower plate B', having flanges bolted together and having their upwardly-extending edges inclined inwardly, waved, and arranged one within the other, substantially as shown and described.

3. The inwardly-inclining waved circular plates B B', having laterally-projecting pipe-sections and flanges for being bolted together and supported, substantially as shown and described.

4. The combination, with the main frame having an opening in its lip or skirt, of a burner having a flanged abutting face fitting

against the inner face of said lip, a mixing-chamber having a flanged abutting face fitting against the outer face of the said lip, and bolts and nuts for clamping the two flanges tightly together upon the lip or skirt of the main frame, substantially as shown and described.

The above specification of my invention signed by me in the presence of two subscribing witnesses.

WARREN L. CORT.

Witnesses:

EDWD. W. BYRN,
SOLON C. KEMON.