

(No Model.)

2 Sheets—Sheet 1.

C. E. DRESSLER.
GAS STOVE.

No. 585,815.

Patented July 6, 1897.

Fig. 1.

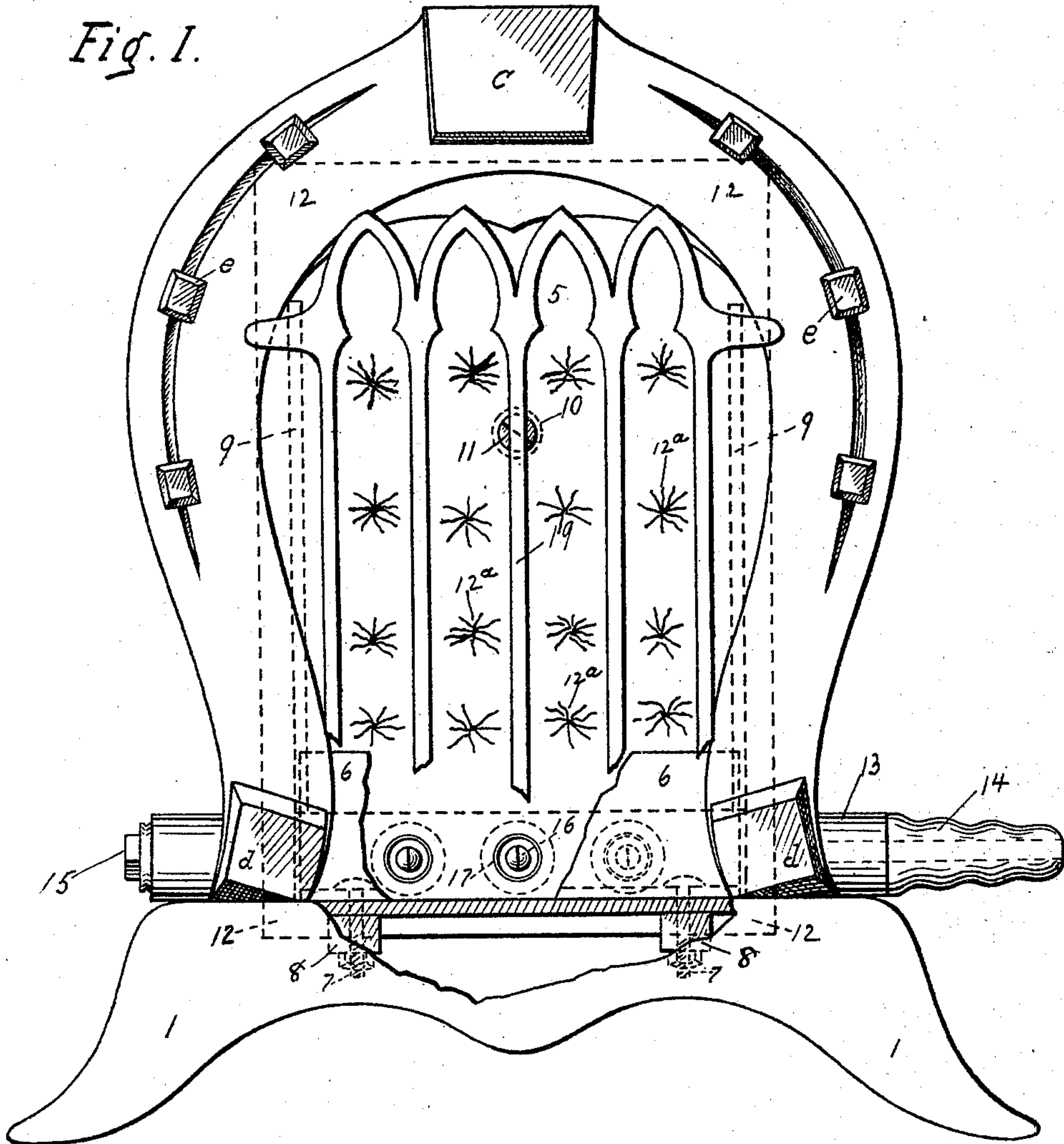
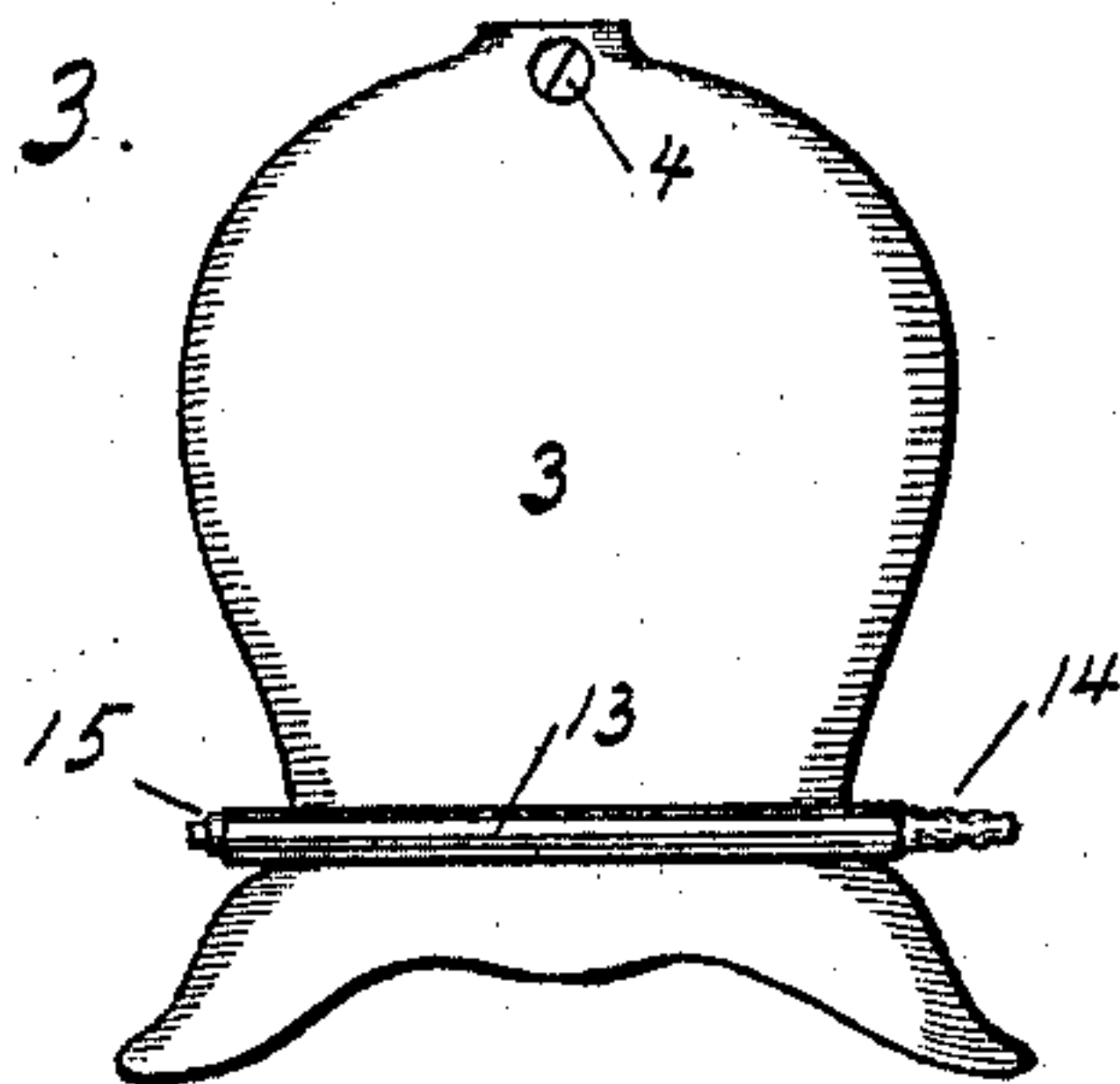


Fig. 3.



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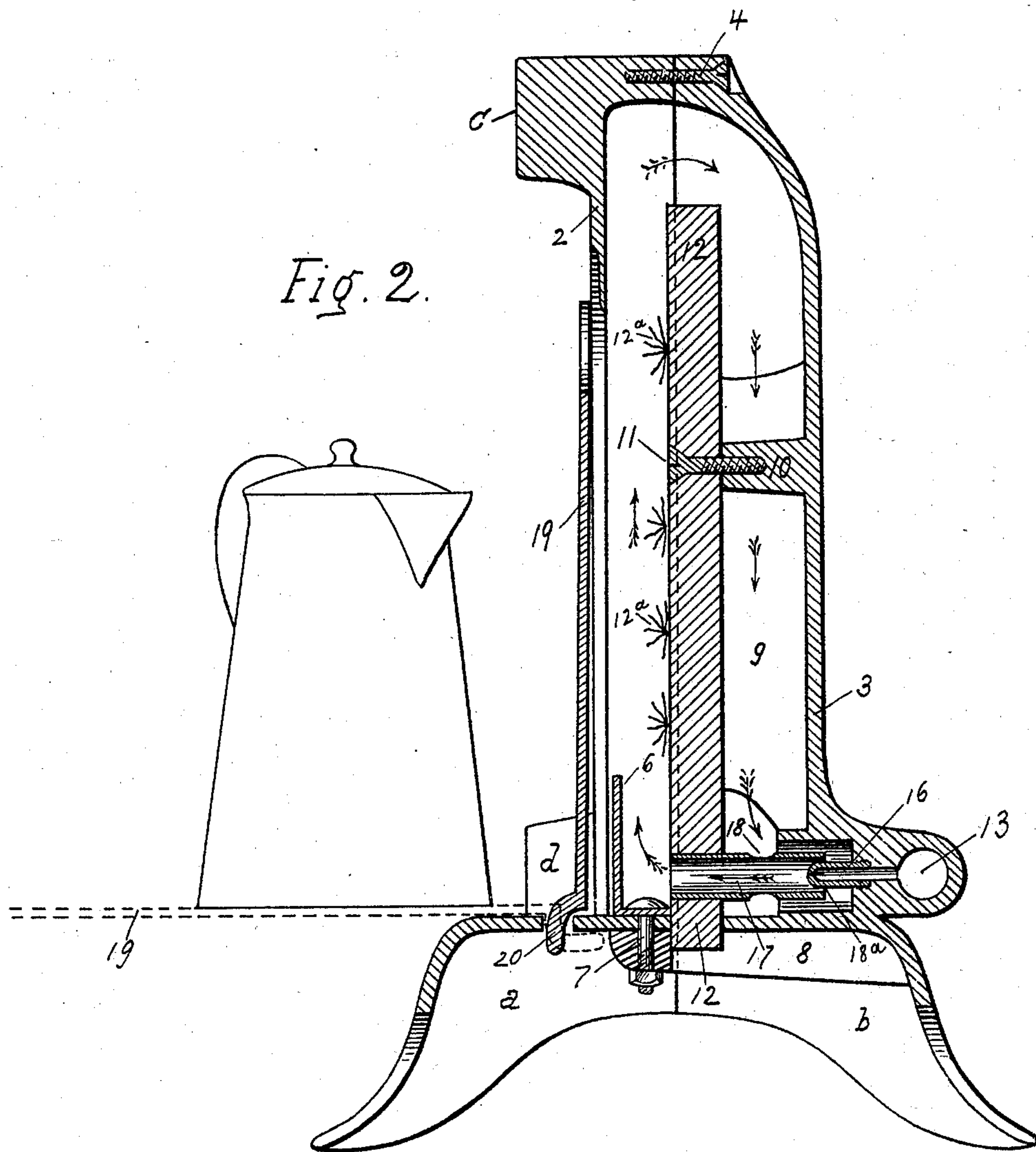
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2 Sheets—Sheet 2.

C. E. DRESSLER.
GAS STOVE.

No. 585,815.

Patented July 6, 1897.



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CHARLES E. DRESSLER, OF NEW YORK, N. Y.

GAS-STOVE.

SPECIFICATION forming part of Letters Patent No. 585,815, dated July 6, 1897.

Application filed October 10, 1894. Serial No. 525,491. (No model.)

To all whom it may concern:

Be it known that I, CHARLES E. DRESSLER, of the city of New York, in the county and State of New York, have invented a new and useful Improvement in Gas-Stoves, which invention or improvement is fully set forth and illustrated in the following specification and accompanying drawings.

The object of this invention is to provide a gas-stove which will effect an efficient and economical radiation of heat with the smallest forms of stove and in which there shall be a practically perfect consumption of the fuel employed.

The invention will first be described in detail and then set forth in the claims.

In the accompanying drawings, Figure 1 shows in front elevation a gas-stove embodying my invention. Fig. 2 is a sectional side elevation of Fig. 1. Fig. 3 is a reduced back view of Fig. 1.

In said figures the several parts are respectively indicated by reference numbers and letters, as follows:

The number 1 indicates a base or support composed of two parts *a* *b*. Formed integral with the parts *a* and *b*, respectively, are front and back plates or shells 2 3, secured together near their tops by a screw or bolt 4. The front plate or shell 2 is provided with a large opening 5, extending from a point near the top of said plate to its bottom and opening into the atmosphere. Within said plate is an angle-iron 6, secured to the part *a* of the base 1 by means of bolts 7, passing through said angle-iron and base and through webs 8, formed on the part *b*, which webs lap the part *a* of the base 1. Said bolts thus serve the purpose also of securing the two parts of the base together, but the several parts may be secured together in any other suitable manner.

The back piece 3 of the stove is provided with vertical ribs 9 and a lug or projection 10. Resting against said ribs and secured to said lug by a screw 11 is a vertical bridge piece or plate 12, which may be made of cast-iron, fire-clay, or any suitable refractory material. Formed in the lower portion of the back piece 3 is a gas-conduit 13, to one end of which, 14, a gas-pipe from any suitable source may be connected, the other end of said conduit being preferably closed with a removable plug 15.

It will be seen that by removing and changing the location of the plug 15 the pipe may be connected to whichever end of the conduit may be most convenient.

Connected to the conduit 13 are several ordinary gas-tips 16, which are partly inclosed within tubes 17, extending through the bridge-piece 12. Each tube 17 is preferably open at both ends, as shown, and is provided in its sides with openings 18. This arrangement of gas-burner and tube constitutes in effect what is known as a "Bunsen" burner, and as many of said burners may be employed as the size of the stove may require.

The operation of this gas-stove is as follows: The supply of gas from the pipe enters the stove through the tip 16 and the tube 17 and is ignited through the opening 5 in the front plate 2. The flame is carried upward in front of the bridge-piece 12, the angle-iron 6 serving to assist in deflecting said flame upward. In heating the air the flame rises in front of the bridge-piece 12 to about its top, where it is extinguished by the current of in-rushing air. Said air, having been heated by the flame, is carried downward behind the bridge-piece 12 and is drawn into the Bunsen burners through the openings 18 in the tube 17, carrying with it any gas or carbon which may have remained unburned or unconsumed. The heated air may also enter the tubes 17 through their rear ends 18^a (into which extend the tips 16) if said ends be left open. If the apertures 18 be omitted, the air will enter only through said ends 18^a. After so entering the Bunsen burners the heated air, containing more or less imperfectly-consumed products of combustion, will be again carried upward through the flame, and thus, with additions of fresh air, be used over and over again until practically perfect combustion is maintained, the flame being consequently kept at its highest temperature as long as this steady circulation of blast continues. The course of circulation of the gas-flame and heated air is indicated by the arrows in Fig. 2. The burning gas thus receives, practically automatically, its exact chemical equivalent from the heated air necessary for the nearest approach to practical perfect combustion—namely, the carbureted hydrogen gas is converted into carbonic-acid

gas and watery vapor, leaving no unconsumed products, either solid or gaseous.

The advantages of my invention will be apparent from the above description. As the
5 air after the first ignition of the gas is heated before entering the Bunsen burners and is kept constantly circulating, thereby increasing its heat by degrees, combustion is more perfect than in other gas-stoves now in use
10 and radiation of heat is obtained with less consumption of gas. No connection with a chimney is necessary for the reason that the carbon contained in the gas is entirely consumed, thus preventing the existence of those
15 poisonous odors or fumes which so frequently attend the use of gas-stoves.

If desired, asbestos fiber 12^a may be secured to the front of the bridge-piece 12 in any suitable manner, which will glow when the flames
20 of the burners play against it, thus increasing the heat-radiating capacity of the stove and making a pleasing glow to the eye.

The stove may be formed in any ornamental design that may be desired. As shown in
25 the drawings, the front plate 2 is shown formed in the shape of a horseshoe, the letter c representing the toe, d the calks, and e the nails. The stove may be nickel-plated or coated with bronze or otherwise made to pre-
30 sent a handsome ornamental appearance.

If desired, a shelf or gate, such as 19, preferably in the form of a grating, may be pivoted to the base 1 by a hook 20 or otherwise, so that when raised to a vertical position it
35 will be ornamental in appearance and rest against the front piece 2, as shown in full lines in Fig. 2. The dotted lines in said figure show the grating lowered to a horizontal position, and when in this position any ves-
40 sel may be placed thereon to be heated by the flame.

Having thus fully described my invention, I claim—

1. A gas-stove, or heater, composed of a
45 closed back and open front; an interposed vertical bridge-piece; one or more tubes or conduits leading from the back of the bridge-piece to the front of the stove at or near the base of the bridge-piece, and provided with
50 an opening or openings; one or more gas-tips having their front ends extending into said tubes so as to form Bunsen burners and lead gas and air directly to the front of the bridge-piece without the intervention of a mixing-
55 chamber; and a gas-supply pipe connected to said gas tips or burners; whereby, the hot products of combustion rise directly in front of and over said bridge-piece and then descend, entering said burners to be reheated
60 and more perfectly ignited or consumed, substantially as set forth.

2. A gas-stove, or heater, composed of a base; an open front and a closed back; an interposed bridge-piece; one or more tubes or conduits leading from the back of the bridge-
65 piece to the front of the stove, at or near the base of said bridge-piece, and provided with an opening or openings; one or more gas-tips having their front ends extending into said tubes so as to form Bunsen burners and lead
70 gas and air directly to the front of the bridge-piece without the intervention of a mixing-chamber; a gas-supply pipe connected to said burners; and a vertical deflecting-plate or deflector in front of said burners and bridge-
75 piece for the purposes set forth.

3. A portable gas-stove, or heater, composed of a base; an open front piece; a closed back piece provided with internal vertical ribs, as
80 9; an interposed bridge-piece resting against said ribs; one or more tubes or conduits leading from the back of the bridge-piece to the front of the stove, at or near the base of said bridge-piece and provided with an opening or
85 openings; one or more gas-tips having their front ends extending into said tubes so as to form Bunsen burners and lead gas and air directly to the front of the bridge-piece without the intervention of a mixing-chamber; and
90 a gas-supply pipe connected to said burners.

4. A portable gas-stove, or heater, composed of a base; an open front and closed back; an interposed bridge-piece; a gas-tip; and a tube surrounding the front of said gas-tip and passing
95 through said bridge-piece to the front of the stove and provided with one or more apertures for the purposes set forth.

5. A portable gas-stove, or heater, composed of a base; an open front and closed back; an interposed bridge-piece; a gas-tip; a tube surrounding the front end of said gas-tip and
100 passing through said bridge-piece to the front of the stove and provided with one or more apertures; and a deflecting-plate or deflector in front of said tube for the purposes set forth.
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6. In a gas-stove, the combination of the following-named parts: an open front piece, as 2; a closed back piece, as 3 provided with internal ribs, as 9, and a lug, as 10; a vertical bridge-piece as 12, interposed between said
110 front and back pieces; a gas-conduit, as 13; a gas-tip, as 16; a horizontal tube, as 17, surrounding the front end of said gas-tip and leading from the back of said bridge-piece to the front of the stove; and a vertical deflec-
115 tor, as 6, in front of said bridge-piece; for the purposes set forth.

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Witnesses:

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