

No. 698,010.

Patented Apr. 22, 1902.

G. W. GRAVES.
BURNER FOR BAKING OVENS.

(Application filed Oct. 2, 1901.)

(No Model.)

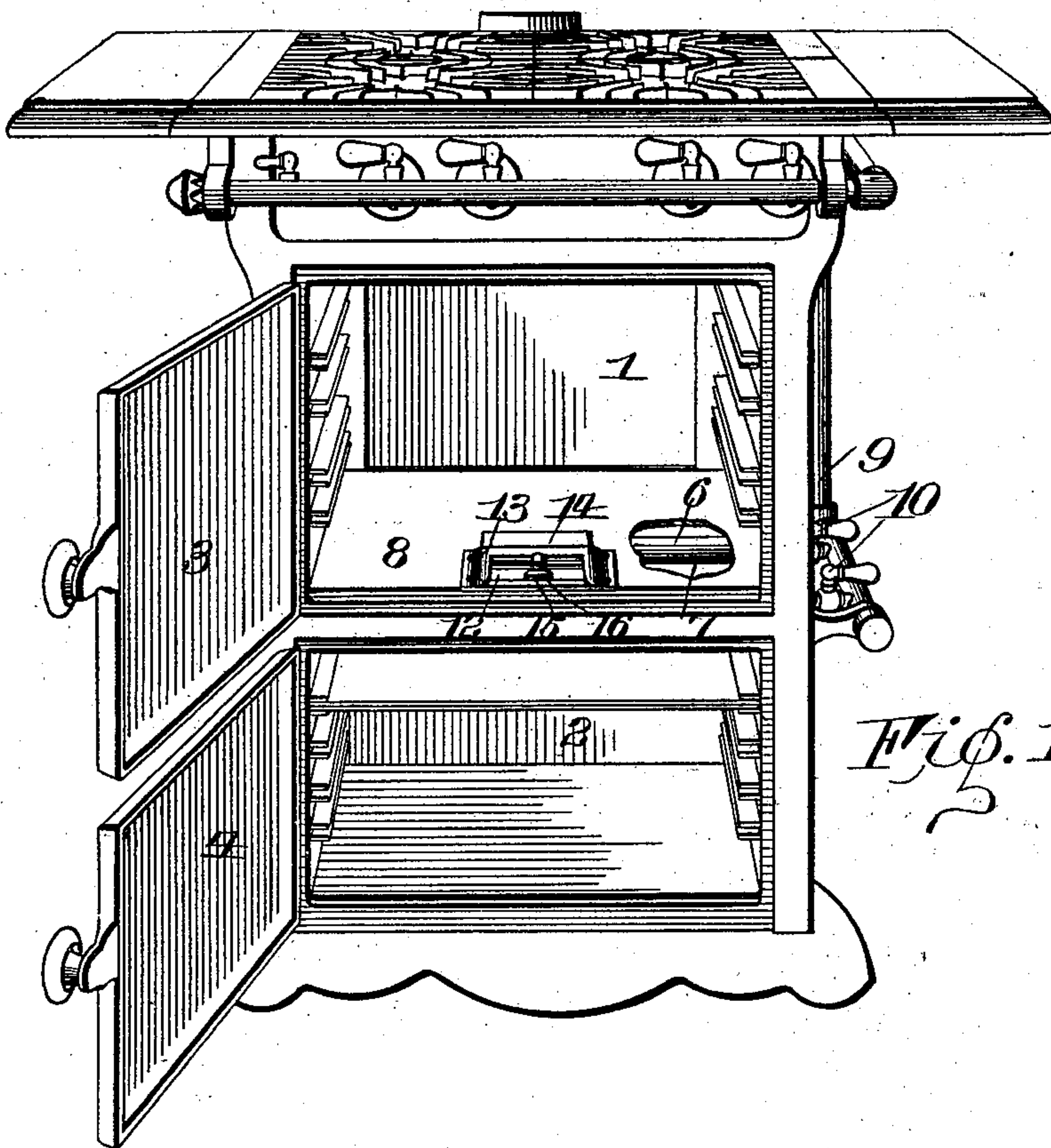


Fig. 1.

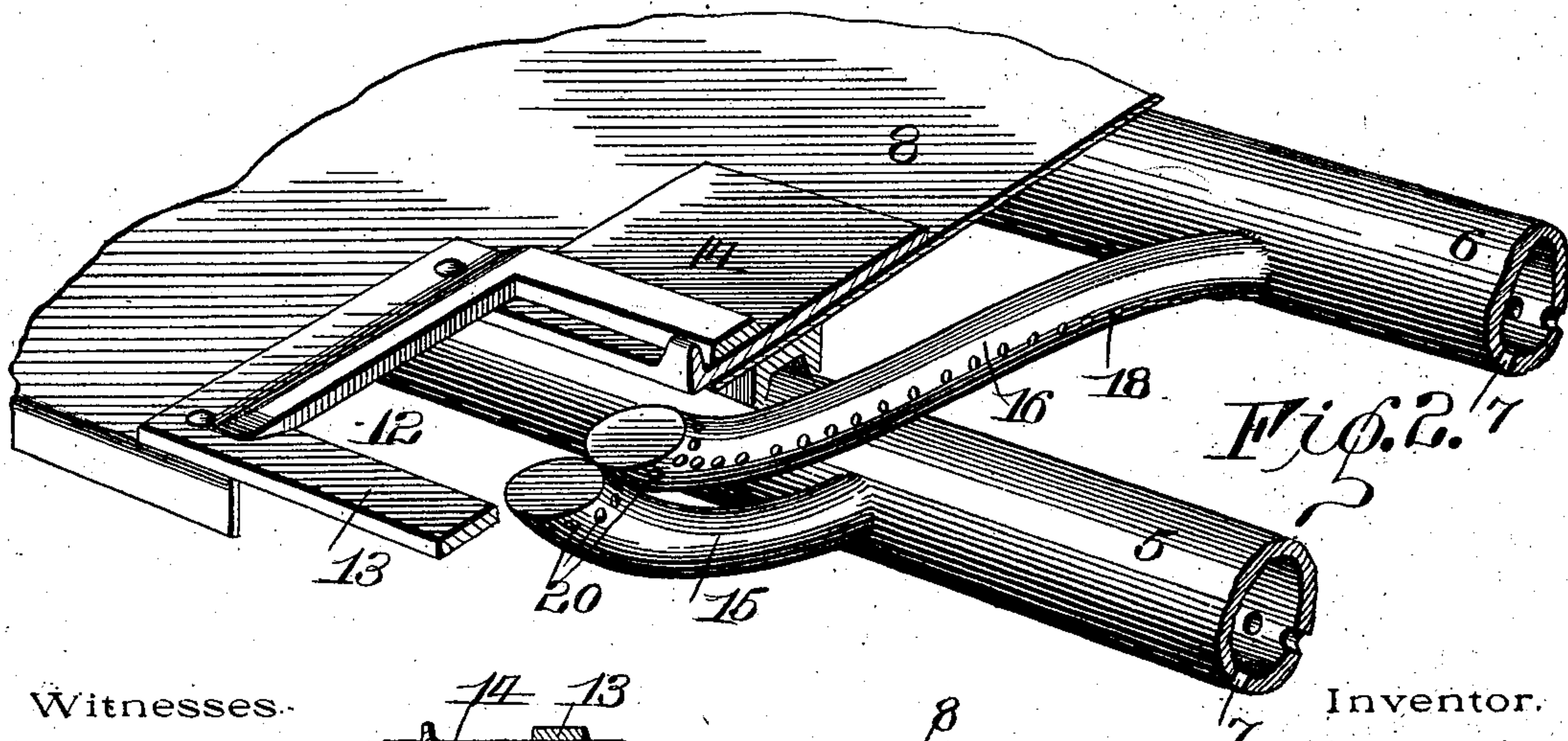


Fig. 2.

Witnesses:

Walter D. ...
H. Willard Rich

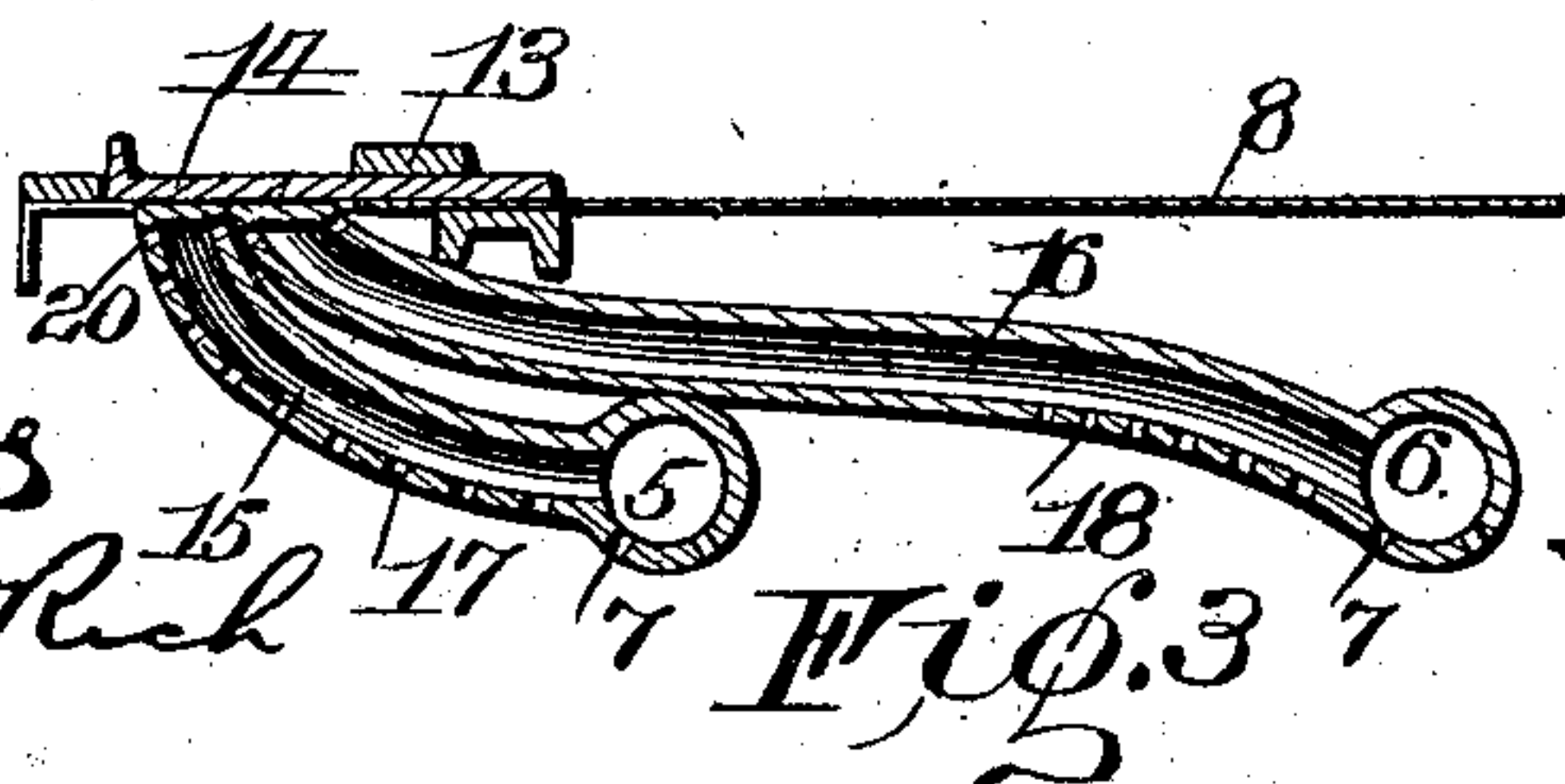


Fig. 3.

Inventor.

George W. Graves
by Edmund H. Church
his Attorney

UNITED STATES PATENT OFFICE.

GEORGE W. GRAVES, OF ROCHESTER, NEW YORK, ASSIGNOR OF ONE-HALF
TO JOHN F. MILLS, JR., OF PORT CHESTER, NEW YORK.

BURNER FOR BAKING-OVENS.

SPECIFICATION forming part of Letters Patent No. 698,010, dated April 22, 1902.

Application filed October 2, 1901. Serial No. 77,281. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. GRAVES, of Rochester, in the county of Monroe and State of New York, have invented certain new and useful Improvements in Burners for Baking-Ovens; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, and to the reference-numerals marked thereon.

My present invention relates to gas-stoves or baking-ovens embodying a chamber which is heated by a gas-flame emitted from suitable burners; and it has for its object to provide igniting devices for said burners so arranged that they may be easily lighted and embodying such a construction of parts that the possibility of an explosion of gas accidentally accumulated in the oven is entirely avoided.

To these and other ends the invention consists in certain improvements in construction and combinations of parts, all as will be hereinafter fully described, the novel features being pointed out in the claims at the end of this specification.

In the drawings, Figure 1 is a front perspective view of a stove or range embodying my invention. Fig. 2 is a perspective view, partly in section, of the oven-bottom and burner; and Fig. 3 is a cross-sectional view thereof.

Similar reference-numerals in the several figures indicate similar parts.

In illustrating my invention I have shown it employed in conjunction with the burners employed for heating the oven-chamber 1 of a well-known form of gas stove or range, which is also provided with a broiling-chamber 2 below the oven, said chambers being normally closed by the doors 3 and 4, respectively. The burners (indicated by 5 and 6) are provided with a series of perforations 7 upon their lower sides and are located beneath the oven-bottom 8, the former at or near the forward side thereof and the latter similarly located under the rear of the oven. At one side of the stove is a gas-pipe 9, supplying gas to the burners in the usual manner through the valves or cocks 10.

In order to insure the oven-door 3 being first opened before the burners are lighted, I provide simple igniting devices for the burners which are only accessible when the oven-door is open.

The bottom 8 of the oven-chamber is provided at its forward edge with a central aperture 12, surrounded by a frame 13, in which is mounted a sliding door 14, normally closing said aperture, and beneath which are the ends of tubes forming supplemental burners or flame-conveyers 15 and 16, the former leading from the forward burner and provided with apertures 17 in its lower side and the latter connected to the rear burner and having the apertures 18 in its side, which at the inner end of the conveyer-tube lead into proximity with the apertures 7 in the lower side of the main burner, as shown in Fig. 2. The outer ends of the flame-conveyers are closed and their side walls are pierced by horizontally-extending apertures or burner-orifices 20, and said burners being arranged in proximity to each other the gas therefrom may be easily ignited from a single match.

The operation is simple and will be easily understood. The supplemental burners or flame-conveyers extend upward slightly from their respective burners, and when gas is admitted to the latter through the valves or cocks 9 it passes upwardly through the tubes and is emitted from the apertures 20, when upon applying a lighted match or taper the flame is transferred from aperture to aperture in each of the conveyers, finally igniting the gas from the apertures or perforations 7 in the main burners. By providing separate flame-conveyers for each of the burners the operator may light either one, and where the outer ends of the conveyer are arranged close together beneath the door 14 there is no danger of the gas escaping if it is desired to light but one burner in case the match should be applied to the wrong supplemental burner or flame-conveyer, the two latter being in such close proximity that the outflowing gas from the apertures 20 in either would be ignited without fail.

In the illustrations the supplemental burners are shown as being formed integral with the main burners; but it will be understood

that they may be attached thereto in a different manner or their location altered without departing from the spirit of my invention.

A baking-oven or a stove embodying an oven-chamber and burners constructed as I have described is designed to overcome the necessity of a pilot-light extending inwardly at the side of the stove and also the inconvenience of igniting the burners by means of a lighted match or taper applied to the burners through the broiling-chamber, as well as to obviate the danger of an explosion accompanying either of these operations, resulting from the escape of at least a portion of the gas which will be allowed to collect in the oven-chamber passing into the latter through the usual imperfect fittings between the walls and bottom of the oven or through apertures frequently provided in the bottom or walls for the passage of heated air. By providing means whereby the oven-door must be first opened the gas that may have accumulated therein from a failure to properly close the cocks or from any other cause will be allowed to escape, and with the oven-door open an explosion of either greater or less severity is impossible. The flame-conveyers are always lighted during the operation of the main burners, assisting to heat the oven, and the door or closure for the aperture in the oven-bottom prevents a current of heated air from rushing through the aperture to cause the unequal heating of the oven.

I claim as my invention—

35 1. The combination with an oven-chamber

open at one side, and a door normally closing said opening, of a gas-burner arranged exteriorly of the chamber, and an extension of said burner leading into the oven and accessible when the oven-door is opened. 40

2. The combination with an oven-chamber having a door at one side thereof, of a burner located at one side of the oven, and having an extension thereof leading into the oven.

3. The combination with an oven-chamber 45 having a bottom provided with an aperture, of a burner arranged beneath the oven, and a perforated tubular extension of said burner accessible through the aperture in the oven-bottom. 50

4. The combination with an oven-chamber having a bottom provided with an aperture, and a closure for said aperture, of a burner arranged beneath the oven, and a perforated tubular extension leading from the burner 55 and having its outer end extending upwardly in proximity to the aperture in the oven-bottom and provided with a series of gas-jet orifices.

5. The combination with an oven-chamber 60 having a bottom provided with an aperture, and a closure therefor, of separate gas-burners arranged beneath the oven, separate supplemental burners attached to each burner having their outer ends arranged in proximity 65 beneath the aperture in the oven-bottom.

GEORGE W. GRAVES.

Witnesses:

G. WILLARD RICH,
ELIZABETH J. PERRY.