No. 821,633. PATENTED MAY 29, 1906.

G. W. GRAVES.

GAS STOVE.

APPLICATION FILED AUG. 3, 1905.

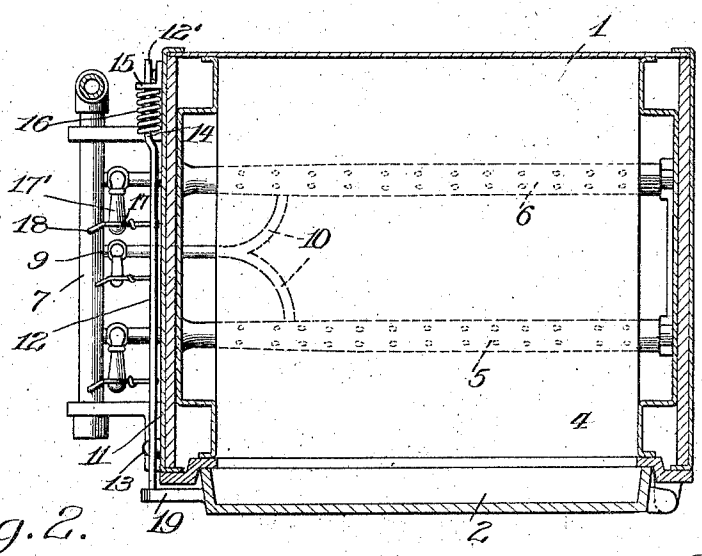



Fig. 1.

Fig. 2.

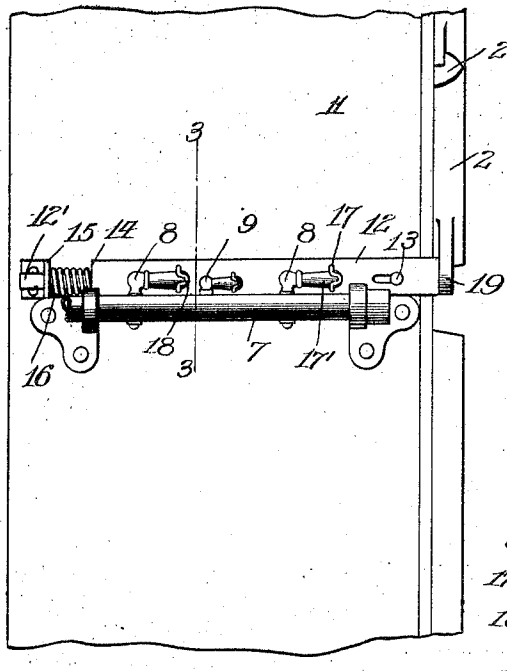



Fig. 3.

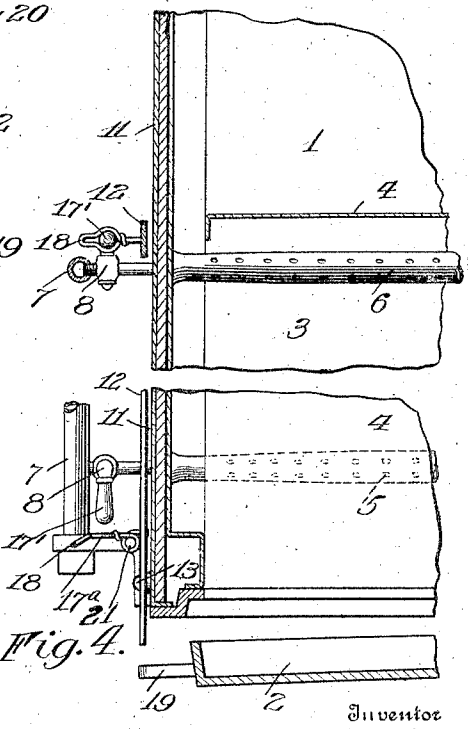



Fig. 4.

Witnesses

Walter B. Payne.

Florence E. Franck.

Inventor

George W. Graves

By Frederick F. Franck

Their Attorney.

# UNITED STATES PATENT OFFICE.

GEORGE W. GRAVES, OF ROCHESTER, NEW YORK.

## GAS-STOVE.

No. 821,633. Specification of Letters Patent. Patented May 29, 1906.

Application filed August 3, 1905. Serial No. 272,487.

*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 Gas-Stoves; 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 the specification, and to the reference-numerals marked thereon.

My present invention relates to gas stoves or ovens which are heated by suitable burners; and it has for its object to provide means whereby it is impossible to inadvertently open the valves which control the flow of gas to the burners without first opening the oven-door, thereby obviating the possibility of an explosion from an accumulation of gas in the oven-chamber.

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

In the drawings, Figure 1 is a horizontal sectional view through a gas-stove, showing my invention applied thereto. Fig. 2 is a side elevation thereof. Fig. 3 is a vertical sectional view on the line 3 3 of Fig. 2; and Fig. 4 is a view of a modified form, showing the oven-door partly open.

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

In the drawings I have shown my invention applied to a well-known form of gas-stove provided with the oven 1, which is normally closed by a door 2 and is separated from the broiling-chamber 3 by the oven-bottom 4. The burners (indicated by 5 and 6) may be of the usual or any preferred construction and are located in the broiling-chamber 3 below the oven-bottom, the burners being connected, as usual, with the supply-pipe 7, from which the flow of gas is controlled by the valves or cocks 8. Provided at the exterior of the stove adjacent the burners and also connected to the supply-pipe 7 is a pilot-light controlled by a valve 9 and provided with the branches 10, leading to the burners 5 and 6. These valves 8 and 9 are usually located at one side of the stove and near the bottom thereof, where they may be accidentally opened in numerous ways and gas allowed to escape into the oven-chamber without the fact being known to the operator of the stove until an attempt is made to light the burners, when the volume of collected gas is ignited, causing an explosion which may result disastrously. To obviate such an occurrence, I have provided means coöperating with the valves and the oven-door in such a manner that the valves when closed can only be adjusted to permit the flow of gas to the burner after the oven-door is opened. Such an arrangement performs the dual purpose of preventing gas from escaping into the oven, and by requiring the operator to open the oven-door the oven-chamber will be ventilated, so that an explosion of gas escaping therein, even after an operator has deliberately opened one of the valves, is prevented.

In carrying out the present embodiment of my invention I locate on the exterior wall 11 of the stove adjacent the valves 8 and 9 a bar 12, the rear end thereof being reduced somewhat at 12′, forming a shoulder 14, between which and a bracket 15, supporting the end of the bar, a spring 16 is interposed, said spring normally tending to move the bar forwardly toward the front of the stove. The forward end of the bar is supported and guided by a securing device, such as a rivet 13, projecting through an elongated aperture, the end of which abutting the rivet limits the outward movement of the bar. The latter is provided with projections 17, coöperating with the valves to lock them against rotation, which is preferably accomplished by making the projections in the form of resilient wire loops or pawls adapted to surround the valve-handles 17′, each loop having an offset portion 18 at its end, with which the end of the handle may engage to move its locking projection laterally to enable the handle to pass into the loop 17′. The handles of the valves or cocks 8 and 9 extend when in closed position in a direction parallel with that of the bar 12, and the bar is adapted to be moved against the action of the spring 16 by engagement with a projection 19 on the door 2, the door being normally held closed by the usual latch 20, and inasmuch as the loops 17 are so located that they can freely pass over the ends of the handles of the cocks 8 and 9 when the oven-door is closed it will be seen that they tend to prevent the valves from being opened accidentally, although permitting the latter to be closed when the oven-

door is shut. If, however, it is desired to close any of the valves which may be open when the oven-door is closed, the handle is caused to engage the offset portion 18 of its locking projection 17 and deflects the latter until it comes opposite the loop or recess therein, when the valve is locked securely in place.

In Fig. 4 the locking projection or pawl 17ª is provided with a coil 21, which permits the pawl to yield more easily on account of the longer length of the wire employed.

The operation will now be clearly understood. When it is desired to light the burners 5 and 6, the oven-door is opened, which allows any gas that may have accumulated in the oven from whatever cause to escape, and the bar 12 being then unrestrained is moved forward by the spring 16, carrying the loops of the projections or pawls 17 out of engagement with the handles of the valves or cocks 8 and 9. The latter may then be rotated and the burners lighted from the pilot-light in the usual manner.

The appliance is extremely simple and can be easily applied to stoves already in use, and as it removes the possibility of explosions from gas accumulated in the oven, the source of such accidents, resulting from accident or carelessness on the part of the operator, is removed.

I claim as my invention—

1. The combination with a chamber, a door for closing said chamber, a gas-burner and a gas-supply pipe connected to the burner having a valve therein, of means tending to prevent the opening of the valve when the door is closed, said means being thrown out of engagement with the valve when the door is open.

2. The combination with a chamber, a door for closing said chamber, a gas-burner, a supply-pipe connected to the gas-burner and a valve therein, of a member operated by the door which tends to prevent the opening but permits the closing of the valve by hand when the door is closed.

3. In a stove, the combination with a chamber having a door, a burner, a valve for controlling the supply of gas to the burner, of a sliding member having means for locking the valve in closed position, said means being out of operative relation to the valve-handle when the door is open.

4. In a gas-stove, the combination with an oven having a door, burners and a pilot-light for said burners, valves for controlling the supply of gas to said burners and pilot-light, of a sliding member provided with projections for engaging the valves to hold them closed, means for operating the sliding member to cause the projections to be disengaged from the valves and a projection on the door coöperating with the member when the door is closed to cause the engagement of the projections on the bar with the valves.

5. In a gas-stove provided with an oven or chamber having a door, a gas-burner, a valve controlling the flow of gas to the burner, of a yielding catch coöperating with the valve-handle adapted to be moved into locking position when the door is closed.

GEORGE W. GRAVES.

Witnesses:
G. WILLARD RICH,
WALTER B. PAYNE.