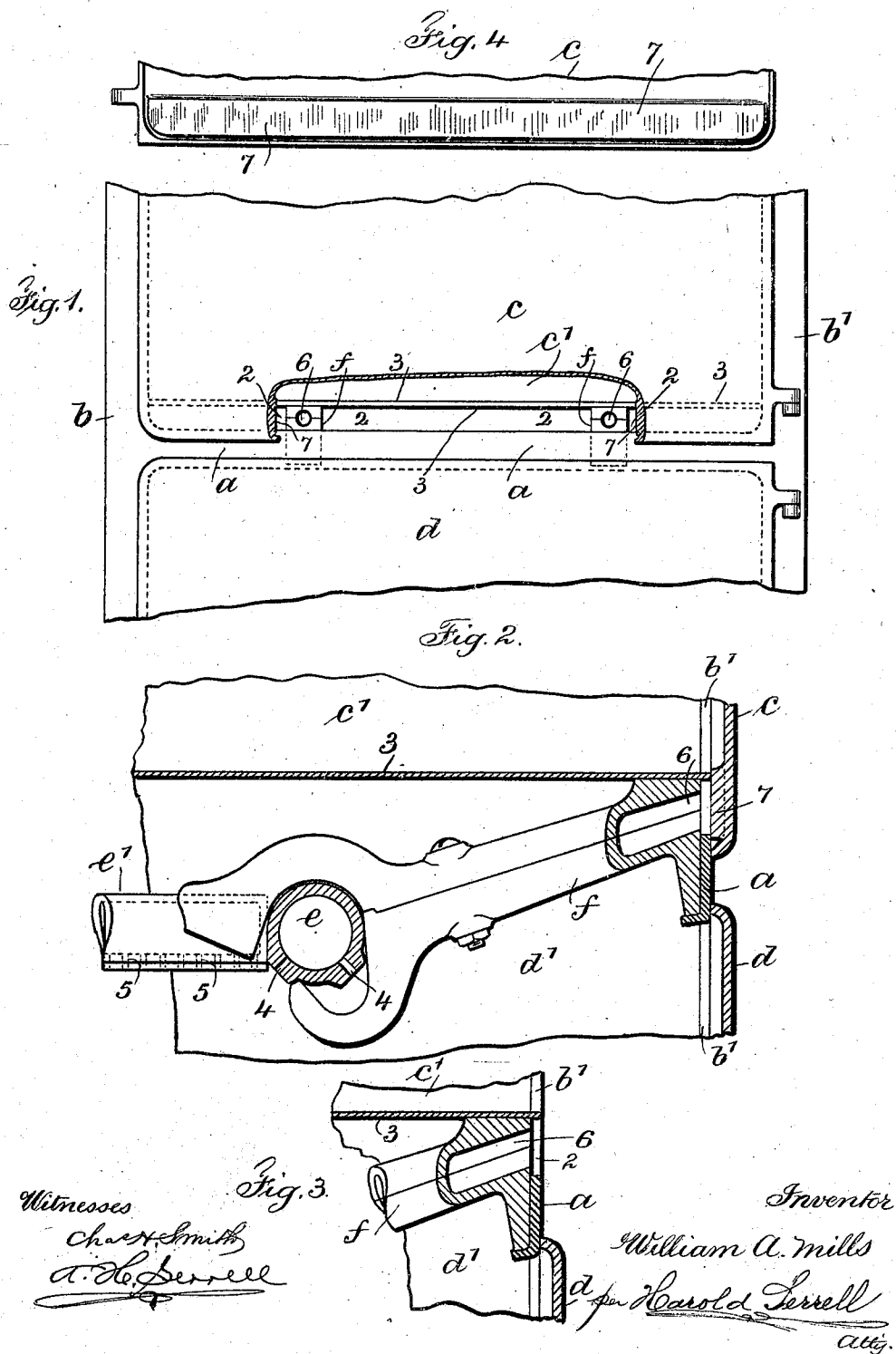


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PATENTED OCT. 8, 1907.

W. A. MILLS.
GAS RANGE.

APPLICATION FILED SEPT. 20, 1906.



UNITED STATES PATENT OFFICE.

WILLIAM A. MILLS, OF PORT CHESTER, NEW YORK.

GAS-RANGE.

No. 867,741.

Specification of Letters Patent.

Patented Oct. 8, 1907.

Application filed September 20, 1906. Serial No. 335,353.

To all whom it may concern:

Be it known that I, WILLIAM A. MILLS, a citizen of the United States, residing at Port Chester, in the county of Westchester and State of New York, have invented an Improvement in Gas-Ranges, of which the following is a specification.

In gas ranges it is desirable to view the burners and to be able to light the same from the front of the range because it is always necessary to exercise great care in the use of gas ranges to avoid an explosion of a mixture of gas and air, especially in the oven. To this end, devices have been employed which advantageously require that the oven door be opened before the burners can be lighted; this permitting the said mixture to escape and consequently avoiding the explosion.

Gas ranges have heretofore been made where it was first necessary to open the oven door, but in these devices either the burners could not be viewed or the oven bottom had to be raised to view and light the burners, both of which conditions have their apparent disadvantages.

My invention relates to a gas range where the oven door must be opened before the burners can be lighted or viewed and the same is especially applicable to a gas range having an oven and a chamber beneath the same in which the burners are located, said lower chamber being separated from the oven by the oven bottom. The lower chamber may be a broiling chamber in which case both the oven and the broiling chamber are provided with doors, the burners being in the broiling chamber.

In carrying out my invention, the division plate extending across the front of the range between the oven and the broiling chamber is reduced in width between the side plates of the range so as to provide an opening through which the burners can be viewed when the oven door is open and into which opening the flame conveyer or conveyers from the burner or burners appear conveniently for the application of a match for lighting the burners. The opening thereby created is closed over when the oven door is shut.

In the drawing, I have represented a gas range having a broiling chamber and in which

Figure 1 is a partial front elevation of the gas range showing the lower portion of the oven door broken away, Fig. 2 is a partial vertical section of a burner and flame conveyer leading to the aperture between the division plate and oven bottom, which latter with parts of the doors are shown in section, Fig. 3 is a detached section similar to Fig. 2, with the oven door removed and Fig. 4 is an elevation of the lower inner edge of the oven door.

a represents the division plate extending across the

front of the gas range and between the side or vertical plates *b b'*, with which side plates the division plate is usually made integral.

c represents the oven door and *c'* the oven; *d* the door of the broiling chamber and *d'* the broiling chamber.

e e' represent parts of a gas burner of ordinary construction with perforations 4 5 therein for the mixture of gas and air in the burner, and *f* represents a flame conveyer of usual construction extending from these burners to the front of the stove and provided with an orifice or mouth at 6, and 3 represents the oven bottom or plate.

The division plate *a* at its lower edge is covered over by the upper edge of the door *d* of the broiling chamber, when such chamber is employed, but this plate does not extend from the door of the broiling chamber to the oven bottom 3 as has heretofore been usual. This division plate is made narrow, as if the usual upper portion had been cut away so as to leave an opening 2 below the oven bottom or plate 3 extending the entire length of the oven and into which the orifice or mouth of the flame conveyer *f* extends, and by the application of a lighted match by which the burners may be lighted. Through the opening 2 the burners beneath the oven bottom 3 may be viewed and this without disturbing the level or continuity of the oven bottom, as a support for articles of food being cooked.

The oven door *c* has its lower edge prolonged so as to come below the opening 2 and close against the upper edge of the plate *a* and the upper edge of the door of the broiling chamber comes against the lower edge of said plate, and when the oven door is shut the opening 2 does not appear and it is necessary to open the oven door before the burners can be lighted, consequently should any mixture of gas and air escape from the burners and get into the oven there is a chance for their escape when the oven door is opened and before the burners are lighted, thus reducing to a minimum the risk of explosion. Furthermore, I have shown and prefer to employ a projection or plate 7 cast with the oven door at the lower edge on the inner side, which aligns with the opening 2, so as when the oven door is shut, both the opening 2 and the orifice or mouth 6 of the flame conveyer are closed off. This position of the door and plate 7 prevents the escape of any of the mixture of gas and air from the burners or flame conveyer into the oven before the door is opened and also prevents heated air passing through the opening 2 during the baking operation as this would unevenly heat the oven, an even or uniform heating being effected on all sides of the oven when the opening 2 is entirely closed off.

In the device of my invention the burners can be

very easily viewed through the opening 2 without stooping sufficiently low to look into the broiling chamber and without the trouble of opening the door of the broiling chamber.

5 It will be apparent from Fig. 2, that each flame conveyer is made with downward and upward projections, the lower of which rests upon the in-turned edge of the division plate and the upper of which comes beneath the oven bottom assisting in supporting the same.

10 I claim as my invention:

1. In a gas range, the combination with an oven, an oven bottom, or plate, a chamber beneath said plate, a burner in the latter chamber and a flame conveyer extending forward therefrom and a door for the oven, of the side plates of the range, a front plate extending across between the side plates and of a width narrower than the distance between the oven bottom and the top of the opening of the lower chamber, whereby a longitudinal opening is provided below the oven bottom through which the burners can be viewed and into which the flame conveyer from the burners extends with the lower edge of the oven door extending below the said opening to close off the same and cut off communication between the opening and the oven when the door is shut.

25 2. In a gas range, the combination with the oven bottom and the door of the broiling chamber, of a horizontal division plate at the front, the lower edge of which underlaps the upper edge of the broiling chamber door and the upper edge of which stops at an appreciable distance below the oven bottom so as to leave a longitudinal opening between said upper edge and the oven bottom through which the burners can be viewed and into which opening the flame conveyer of the burners extends for lighting the burners at the orifice thereof, an oven door, the lower edge of which extends over said longitudinal opening and overlaps the upper edge of the division plate so that when the oven door is closed said aperture is closed off and a plate projection 7 formed with the oven door near the lower edge on the inner surface and adapted when the door is closed to close off the orifice of the flame spreader and also completely close off the longitudinal opening.

3. In a gas range, the combination with the oven, the oven door and oven bottom and a burner in a chamber beneath the latter, of a horizontal division plate at the front spaced apart from the oven bottom so that the upper edge of said plate stops at an appreciable distance below the oven bottom so as to leave a longitudinal opening between said upper edge and the oven bottom extend-

ing the entire length of the oven and through which the burners can be viewed, and means extending forward from the burner into the longitudinal opening and by which the burner can be lighted.

4. In a gas range, the combination with the oven bottom and the door of the broiling chamber, of a horizontal division plate at the front, the lower edge of which is provided with a ledge and underlaps the upper edge of the broiling chamber door and the upper edge of which stops at an appreciable distance below the oven bottom so as to leave a longitudinal opening between said upper edge and the oven bottom through which the burners can be viewed and a flame conveyer extending from the burners forward toward the said longitudinal opening and constructed at its orifice with a part extending down and resting upon the ledge of the said front division plate and its upper part extending up to the under side of the oven bottom as a support, the lighting orifice of the said flame spreader being in the said horizontal opening.

5. In a gas range, the combination with the oven, the oven door and oven bottom, and a burner in a chamber beneath the latter, of a horizontal division plate at the front spaced apart from the oven bottom so that the upper edge of said plate stops at an appreciable distance below the oven bottom so as to leave a longitudinal opening between said upper edge and the oven bottom extending the entire length of the oven and through which the burners can be viewed, the lower edge of the oven door extending over the said longitudinal opening and having a longitudinally extending projection or plate 7 closing over the said opening and also cutting off communication between said opening and the oven when the door is shut.

6. In a gas range, the combination with the oven, the oven door and the oven bottom, and a burner in a chamber beneath the latter, of a horizontal division plate at the front spaced apart from the oven bottom so that the upper edge of said plate stops at an appreciable distance below the oven bottom so as to leave a longitudinal opening between said upper edge and the oven bottom extending the entire length of the oven and through which the burners can be viewed, the lower edge of the oven door extending over the said longitudinal opening and having a part contacting with the edge of the oven bottom so as to simultaneously close over the said opening and cut off communication between the opening and the oven when the door is shut.

Signed by me this eighteenth day of September 1906.
WILLIAM A. MILLS.

Witnesses:

GEO. T. PINCKNEY,
BERTHA M. ALLEN.