

J. M. WILSON.

Cooking and Heating Range.

No. 132,380.

Patented Oct. 22, 1872.

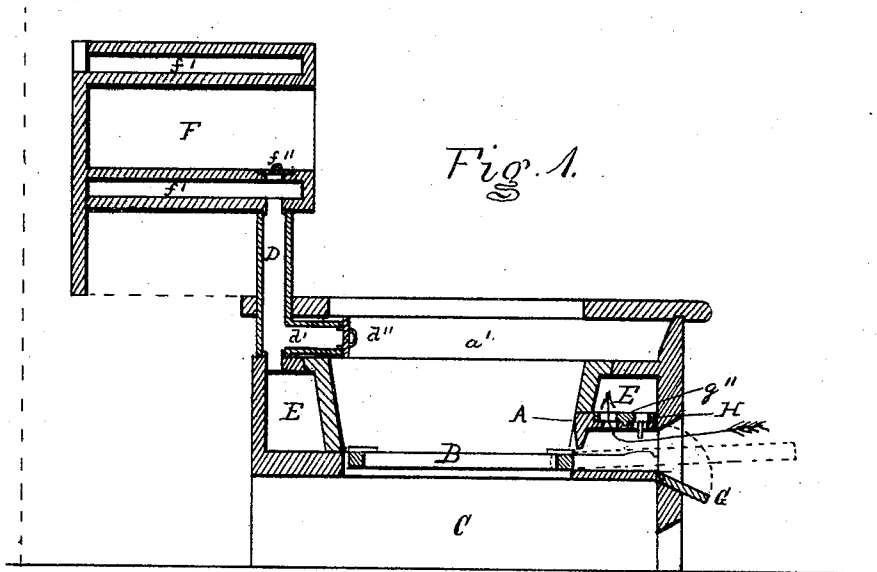


Fig. 2.

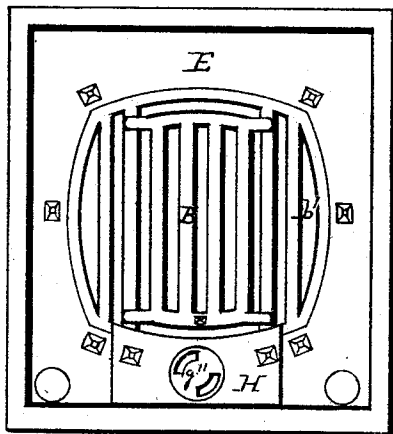
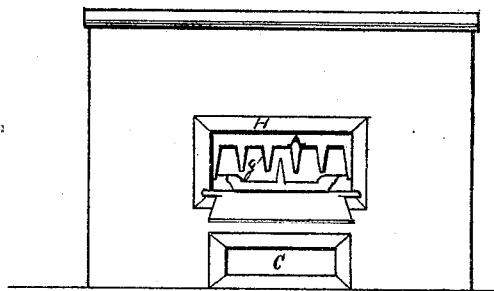


Fig. 3.



WITNESSES:

Benz Morison
W. H. Morison.

INVENTOR:

John M. Wilson

UNITED STATES PATENT OFFICE.

JOHN M. WILSON, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN COOKING AND HEATING RANGES.

Specification forming part of Letters Patent No. 132,380, dated October 22, 1872.

To all whom it may concern:

Be it known that I, JOHN M. WILSON, of the city of Philadelphia, in the State of Pennsylvania, have invented certain Improvements in Ranges for Cooking and Heating, of which the following is a specification:

The first part of my invention relates to the combination of a stationary rake with the mouth of the draft-opening in front of the fuel-box in such a manner that the series of connected draw-bars of the grate can be freely moved outward and inward without obstruction therefrom; the object of this part of my invention being to cause the burden upon the said grate to be swept off into the ash-pit below whenever the said connected draw-bars are being pulled forward for the purpose of clearing the fire-box of its contents. Another part of my invention relates to the construction and arrangement of a flue-pipe between the hot-air chamber and the oven above it in such a manner that the hot air can be discharged either into or around the oven, as may be desired, or into the fire-chamber to cause the combustion of the gas produced therein. Another part of my invention relates to the arrangement of an adjustable draft-regulator in the upper side of the mouth of the draft-opening instead of the adjustable slide and openings in the drop-door in front of said opening; the object of this part of my invention being to dispense with the slide and openings in said drop-door because of the difficulty of keeping said slide in proper order in use.

Figure 1 is a vertical central longitudinal section of a range embodying my invention. Fig. 2 is a plan view of the grate and of the upper side of the mouth of the draft-opening in front of the fire-box. Fig. 3 is a front view of the mouth of the draft-opening with the falling or drop door as open, and showing the rake in its relation thereto and to the connected draw-bars of the grate.

The rake A consists of a series of teeth, which project vertically downward in a stationary manner, so as just to clear the connected series of draw-bars B of the grate *b'*, and thus allow the said draw-bars to be freely drawn outward or pushed inward, as occasion, for the removal of cinders, ashes, &c., may at any time require, the rake A sweeping the bur-

den into the ash-pit C below. The flue-pipe D, for conducting the heated air from the air-heating chamber E into the hot-air space *f'* around the oven F, has a branch, *d'*, which is fitted with a detachable stopper, *d''*, so that when the stopper *d''* is withdrawn the hot air will pass into the fire-chamber *a'* and cause the ignition or combustion of the carbonic-oxide gas, the escape-valve of the oven-space *f'* being partially closed for the purpose of increasing the heat of the oven F. Directly over the upper end of the flue-pipe D there is an adjustable opening, *f''*, through which hot air can be admitted directly into the oven when a very strong heat is desired therein. The drop-door G has not any openings through it, and hot air is admitted to the mouth *g'* through an adjustable draft-regulator valve, *g''*, in the top plate H of the mouth of the draught-opening below when the drop-door G is closed.

It will be readily understood that as the connected draw-bars B are drawn out together the burden on the grate will be swept off into the ash-pit C by the stationary rake A; that the hot air in the chamber E may be conducted directly into the oven F or into the space *f'* around the oven, or into the fire-chamber *a'*, as may at any time be desired; and that the objectionable slide and opening in the drop-door G, as heretofore required, are dispensed with by the adoption of the adjustable valve *g''* in the plate H, which will not be liable, from its construction and position, to get out of order.

I claim as my invention—

1. The stationary rake A, in combination with the mouth of the draft-opening *g'*, when arranged in relation to the connected series of draw-bars B, as described and set forth, for the purpose specified.

2. The flue-pipe D with its branch *d''*, in combination with the hot-air chamber E, oven F and its surrounding space *f'*, and the fire-chamber *a'*, arranged to operate in the manner and for the purposes set forth.

3. The adjustable valve *g''* in the plate H in lieu of the slide and openings heretofore required in the drop-door G, as and for the purpose hereinbefore set forth.

Witnesses: JOHN M. WILSON.
BENJ. MORISON,
WM. H. MORISON.