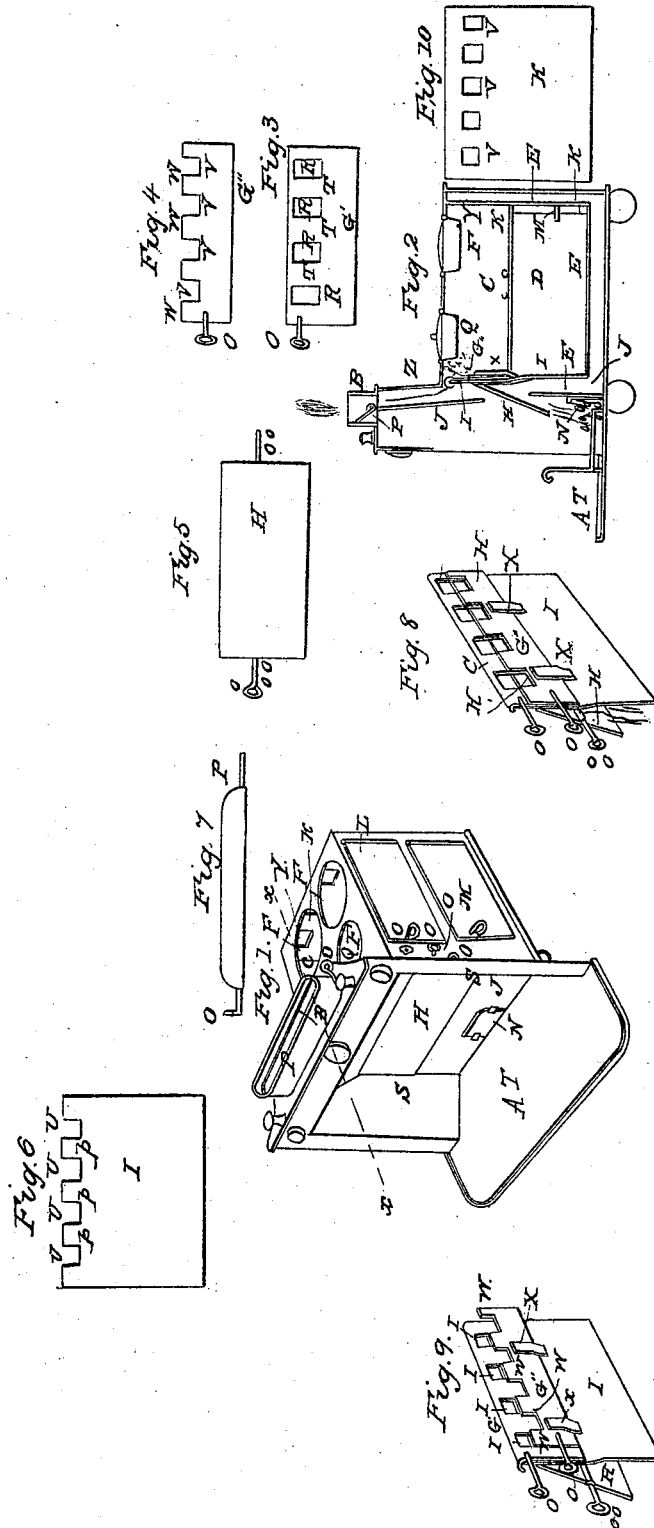


A. R. RING. Cooking Stove.

No. ,1427.

Patented Dec. 12, 1839.



UNITED STATES PATENT OFFICE.

ABNER R. RING, OF PARMA, NEW YORK.

FRANKLIN COOKING-STOVE.

Specification of Letters Patent No. 1,427, dated December 12, 1839.

To all whom it may concern:

Be it known that I, ABNER R. RING, of Parma, Monroe county, State of New York, have invented a new and useful Improvement in Franklin Cooking-Stoves, which is described as follows, reference being had to the annexed drawings of the same, making part of this specification.

The nature of this improvement consists in a certain new and useful combination of a swinging damper in the back plate of a common Franklin stove with two sliding register plates or valves arranged and operating in such a manner that the draft from said common Franklin fire place is carried down under a rectangular oven placed behind and connected with the franklin, having a boiler chamber over said oven and in constructing the back plate of the boiler chamber with apertures in it, so as to admit of the draft passing under the boilers after it has circulated under the oven and escaping in front through apertures in the front plate of the oven and boiler space governed by the outer and inner registers into the main flue or smoke pipe above the franklin; and also in so governing the register plates as to shut off the draft through the front plate of the oven, close the swinging damper against the back plate of the franklin, and a fire being kindled in the boiler space cause the draft to pass through the apertures in the back plate of the oven and boiler space into the flue behind it, thence under the oven and up in front through the flue formed by the back plate of the franklin and the front plate of the oven and boiler chamber into the main flue or pipe above the franklin.

To enable any person skilled in the art to which this invention appertains to construct and use the same, I now proceed to describe its construction and operation more particularly.

Figure 1 is a perspective view of the Franklin cooking stove; Fig. 2, sectional view at the line *x x* of Fig. 1; Fig. 3, inner sliding register; Fig. 4, outer ditto; Fig. 5, swinging damper in the back of the franklin; Fig. 6, perforated plate against which the inner sliding register moves; Fig. 7, damper in the main flue; Fig. 8, perspective view of the dampers in a position to cause the draft to pass under the boilers nearest the fire; Fig. 9, perspective view of the dampers in a position to cause the draft to pass around the oven; Fig. 10, back plate with apertures.

Similar letters in the figures refer to similar parts.

A is the Franklin fire place; B, main flue; C, boiler apartment and which may be converted into a chamber of combustion.

D is an oven; E, the flue around the oven; F Q, the boilers in the top plate of the boiler apartment; G' G'', sliding register plates; H, the swinging damper in the back plate of the Franklin fire place; I, division plate with apertures in it for the draft to pass through to the boiler apartment and against which the inner sliding register G' moves on one side and the main damper H swings on the other side; K, back plate of oven and boiler apartment with apertures Y in it for the draft to pass through to the boiler apartment or from the latter around the oven; L, doors of the boiler apartment and chamber of combustion; M, door of the oven; N, door of the soot hole; O, handles of the dampers and registers; P, a damper in the main flue; Q Q, boilers nearest the fire place; S S, sides of the Franklin stove; A T, bottom of ditto.

The Franklin stove A is made like other stoves in use, except that it has a rectangular opening in the back plate for the draft to be turned through said aperture when required, closed by a swinging damper H when the draft is required to be passed upward in the usual manner, and also another back plate I placed parallel with the one just described and at a short distance in the rear of the same, so as to form a flue E' for the draft when turned from the Franklin stove to the boilers Q or oven D, or from the boiler apartment C when converted into a chamber of combustion, and also in extending the bottom plate A T of the Franklin stove to the rear a sufficient distance to erect thereon a cooking apparatus, consisting of a rectangular oven D for baking and a boiler apartment C above, into which are inserted several boilers Q F for culinary operations, and which apartment may be converted into a chamber of combustion, said boiler chamber having a door on one side with holes on the opposite side to admit a draft when used for a fire chamber, which will bring the fire immediately under the boilers and over the oven, said apartment being furnished with a door L at the side for the introduction of fuel. The top plate of this apartment is also the top plate of the cooking part of the stove and contains the apertures for the boilers. It is joined to and forms a right angle with

the upper back plate Z of the franklin. The back and side plates of the cooking apparatus and the top plate of the oven, which is also the bottom plate of the boiler apartment; and the bottom of the oven are made in the usual manner. The front plate I of the oven and boiler apartment is made rectangular and is cast with alternate rectangular apertures *v* and projections, *p*, on its upper edge, the apertures being for the passage of the draft as hereafter described, and said plate is curved near the center, at which place there are cleats X forming channels for the registers to slide in. The inner register G', which is made hook shaped at its upper edge for hooking over and sliding on the upper edge of plate I, moves against plate I, while the outer register G'', which is half the width of the inner one, slides against the latter and between it and the cleats. The inner register G', Fig. 3, is a rectangular piece of metal of suitable length, breadth and thickness, containing a number of rectangular openings R and solid parts T between said openings, which are brought to coincide with the apertures U in plate I when required to close them and is furnished with a handle O for moving it to the right or left. The outer sliding register G'', Fig. 4, is the same length as the inner one, but only half its width, and is cut out on its upper edge, so as to form alternate rectangular depressions *v* and projections W for partly closing and entirely opening the apertures in the inner register, against which it slides backward and forward, having a handle O for moving it. The back plate K of the oven, which is placed a short distance in front of the back plate of the cooking part of the stove, is continued from the bottom of the oven to the under side of the top plate of the stove, having apertures Y in it along its upper margin for the passage of the draft from the franklin A under the oven to the boiler apartment C and from the boiler apartment (when converted into a chamber of combustion) around the oven D to the main flue B.

The swinging damper H is a rectangular piece of metal of greater width than the opening in the back plate of the franklin in order to lap over its edges when the aperture is to be closed and to reach the center of the inner register when it is to be opened. It is suspended on a horizontal rod *o o* passing through the sides S of the franklin and is turned by a handle O. The damper P for dividing the main flue B into two parts and changing the draft into either at pleasure is also suspended on a horizontal rod *o* passing through the ends of the flue and is turned to the right or left by a handle O.

The legs, boilers, and ornaments of the stove are made in the usual manner.

Operation: When the fire is made in the

franklin A and the draft is to be turned under the boilers F and Q the dampers and registers must be placed in the position represented in Figs. 2 and 8—namely, all the apertures coincident and the damper H turned, its upper edge being against plate I and the damper P turned so as to open the rear part of flue B and close the front part. When the draft is required to be turned around the oven D and under the boilers the registers and dampers must be placed in the position represented in Fig. 9—namely, as described above excepting the outer register G'', which must be moved in so as to bring its projections W over the lower parts of the apertures R, which will cut off the draft through these apertures and turn it down under, up and over the oven and through the upper parts of the apertures R to the main flue B. The position of the dampers and registers will be the same as that just described when fire is made in the boiler apartment to be used under the boilers alone; but when it is required to cause the draft from the boiler apartment to circulate around the oven, then the inner register G' must be moved so as to close the apertures U in plate I entirely, which will force the draft to pass along the flue E to the main flue B.

Having now described the construction and operation of the improved Franklin cooking stove, I will proceed to state what I claim as my invention and desire to secure by Letters Patent, which is—

The combination of the damper H in the back plate J of the franklin with the register plates or valves G' G'' arranged and operating as described, by means of which the draft is carried down under the oven D and in connection therewith the constructing the back plate K of the boiler chamber C with apertures Y so as to admit of the draft passing under the boilers after it has circulated under the oven and escaping in front through the apertures U governed by the outer register G'' into the main flue or double pipe B all as described; also the combination of the apertures Y in the back plate K of the boiler chamber C with the valves or registers G' G'' by means of which arrangement the inner register G' being closed the boiler chamber C may be employed as a chamber of combustion, the draft passing through the aforesaid apertures Y into the back flue E, thence under the oven and up in front through the flue E' formed by the back plate J of the franklin and the front plate I of the oven and boiler chamber, into the main flue or pipe B the whole being constructed and operating as described.

ABNER R. RING.

Witnesses:

WM. P. ELLIOT,
EDMUND MAHER.