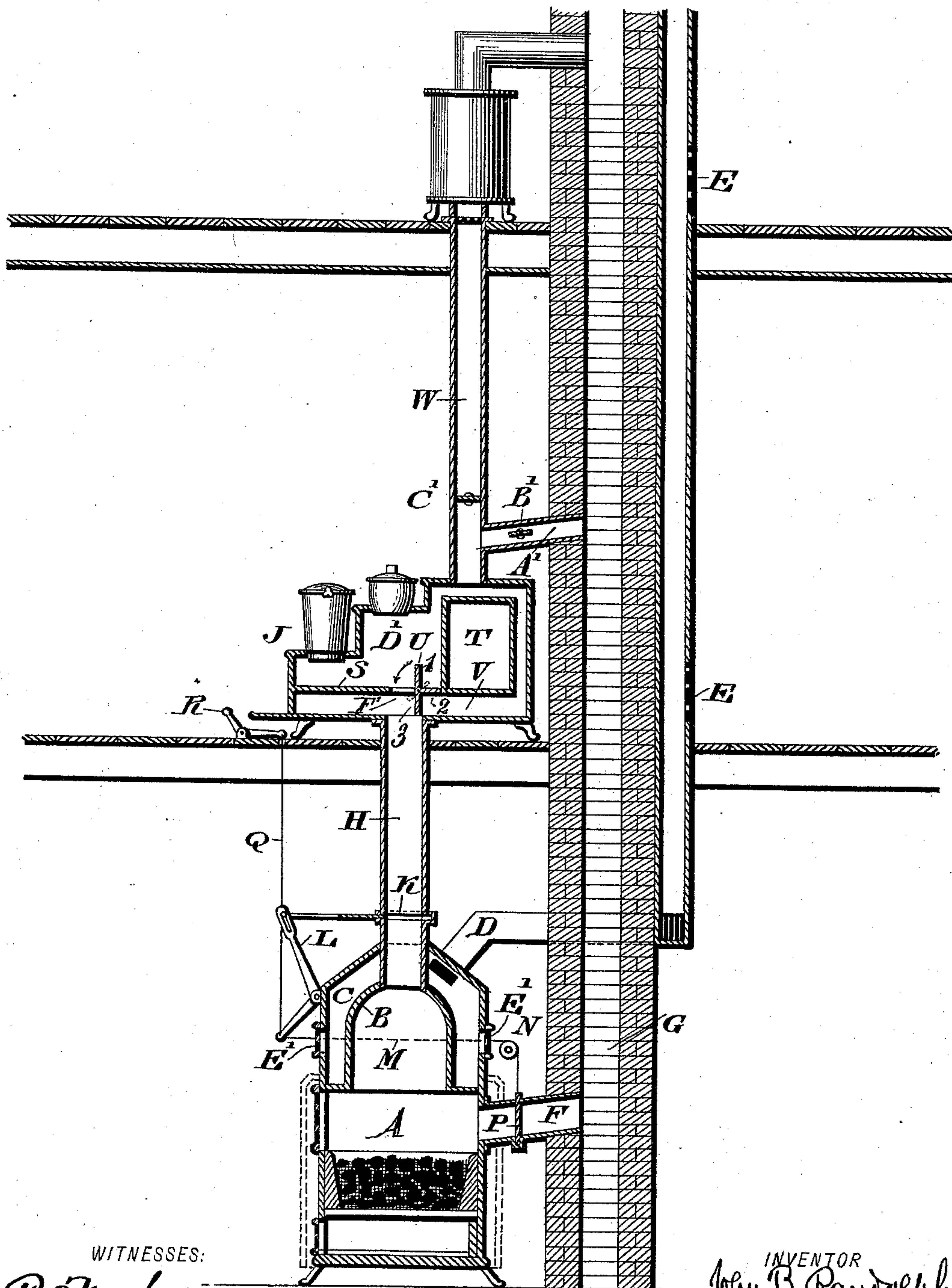


(No Model.)

J. B. RANDOLPH.
COMBINED FURNACE AND STOVE OR RANGE.

No. 540,365.

Patented June 4, 1895.



WITNESSES:

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JOHN B. RANDOLPH, OF BURLINGTON, NEW JERSEY.

COMBINED FURNACE AND STOVE OR RANGE.

SPECIFICATION forming part of Letters Patent No. 540,365, dated June 4, 1895.

Application filed May 11, 1894. Renewed May 4, 1895. Serial No. 548,165. (No model.)

To all whom it may concern:

Be it known that I, JOHN B. RANDOLPH, a citizen of the United States, residing at Burlington, in the county of Burlington, State of New Jersey, have invented a new and useful Improvement in a Combined Furnace and Stove or Range, which improvement is fully set forth in the following specification and accompanying drawing.

My invention consists of a furnace having a flue or flues for conducting heat to the place of service, and another flue leading to a cooking stove or range, and means for diverting the heat both in the furnace and stove or range, all as will be hereinafter described.

The figure represents a vertical section of a furnace and stove embodying my invention.

Referring to the drawings, A designates a furnace which has the dome or heating drum B, and the air space C with which the hot air flue D communicates, the latter passing up through the building and having the outlets E for the various rooms, in which hot air registers may be placed. A flue F leads from the fire chamber of the furnace directly to the smoke flue G.

H designates a flue which leads from the fire chamber of the furnace to a cooking stove or range J. In said flue H is a damper K which has a connection with one end of a bell crank L, the latter being pivoted to a suitable point. Attached to the other arm of the bell crank L are the two cords M and Q, the cord or connection M passing over a roller N, and being fastened to a damper P, in the flue F, the other cord Q passing up through the floor to the room above, where it is attached to an elbow lever R, by means of which said crank L can be operated, said dampers K and P being so arranged that when one is open the other is closed, and vice-versa.

T designates an oven in the chamber D' of the stove J, and around said oven is a passage V which communicates with the flue H.

In the chamber D' is a partition S, and between it and the oven T is an opening F', in which is situated the three-way valve U having the wings 1, 2 and 3 said valve being operated from the exterior of the stove J, and so arranged, that when in the position as shown in the drawing, that is when the passage V is closed, the heat and particles of com-

bustion from the flue H pass into the chamber D', and when the said valve U is turned, in the direction as indicated by the arrow, the opening F' to the chamber D' is closed, the passage V is opened and the heat and particles of combustion are directed into said passage V, around the oven T.

A flue W communicates with the chamber D' within the stove J, and also with the passage V, through which flue the heat and products of combustion escape from the stove. The flue W passes through the floor and enters the room above, where it may be utilized for heating the same, and the products of combustion then conducted to the smoke flue G. A flue A' leads from said flue W directly into the smoke flue G, and dampers B' and C' in the respective flues A' and W permit the closing of the flue W if it is not desired to conduct the heat to the floor above.

The operation is as follows: The air in the space C, entering at the point E' is heated as usual, and passes up through the flue D, whence it is permitted to escape at desired points. The damper K being closed and the damper P being open, the smoke and products of combustion pass into the smoke flue G through the flue F. If it is desired to heat the interior of the stove, or range J, the elbow lever R is operated. This opens the damper K and closes the damper P, whereupon all the products of combustion pass directly into the stove J. If it is desired to bake the interior of the stove, the valve U is turned in the direction of the arrow, and the heat passes around the oven T. If the cooking is to be done in the top of the stove, the passage V is closed and the heat is conducted to the chamber D', as shown in the drawing. In either case, the heat, smoke, &c., leaves the stove through the flue W, and if the room above is to be heated the damper B' in the flue A' is closed, and the damper C' is opened, whereby the heat will pass up the said flue, and thence into the smoke flue G.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A stove having a chamber, a partition therein, an oven in said chamber, an opening between said partition and said oven, a three-way valve in said opening, a passage around

said oven, which is adapted to be closed by said valve, in combination with a furnace having a hot air chamber, a smoke flue leading to a chimney, a second smoke flue leading
5 into the stove, and dampers in said smoke flues which are adapted to operate in unison, all substantially as described.

2. In a combined furnace, and stove, a stove having a chamber D', a partition S therein, an
10 oven T in said chamber, an opening F' between the said partition and oven, a three-way valve U in said opening F', a passage V surrounding said oven, and a heat supplying flue leading into said stove adjacent to said

valve, said parts being combined substantially as described. 15

3. The furnace A, hot air chamber C, hot air flue D, smoke flue F, flue H, dampers in said flues F and H adapted to be operated in unison, a stove J having the chamber D' and
20 oven T, passage V the three-way valve U, and flues W and A', the latter being provided with the dampers C', and A', said parts being combined substantially as described.

JOHN B. RANDOLPH.

Witnesses:

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