P. J. ACKERMAN.

Combined Cook Stove and Air Heater.

No. 31,144. Patented Jan'y 22, 1861.

Fig. 2

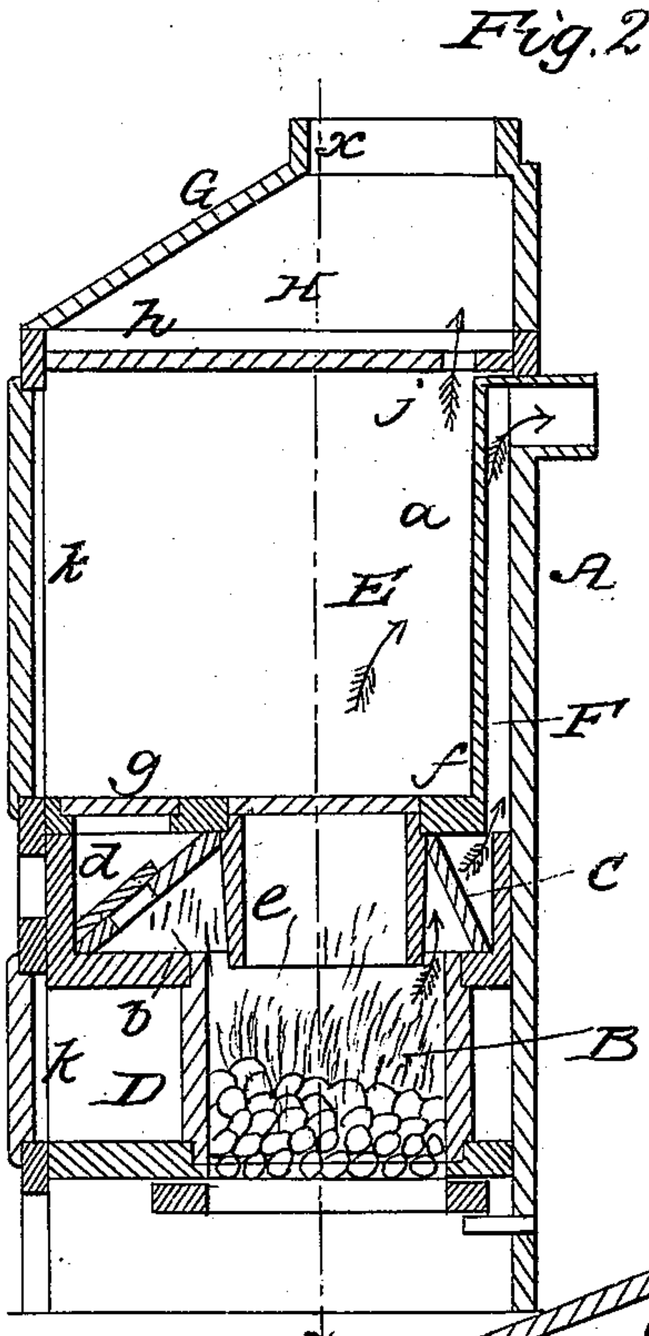


Fig. 3

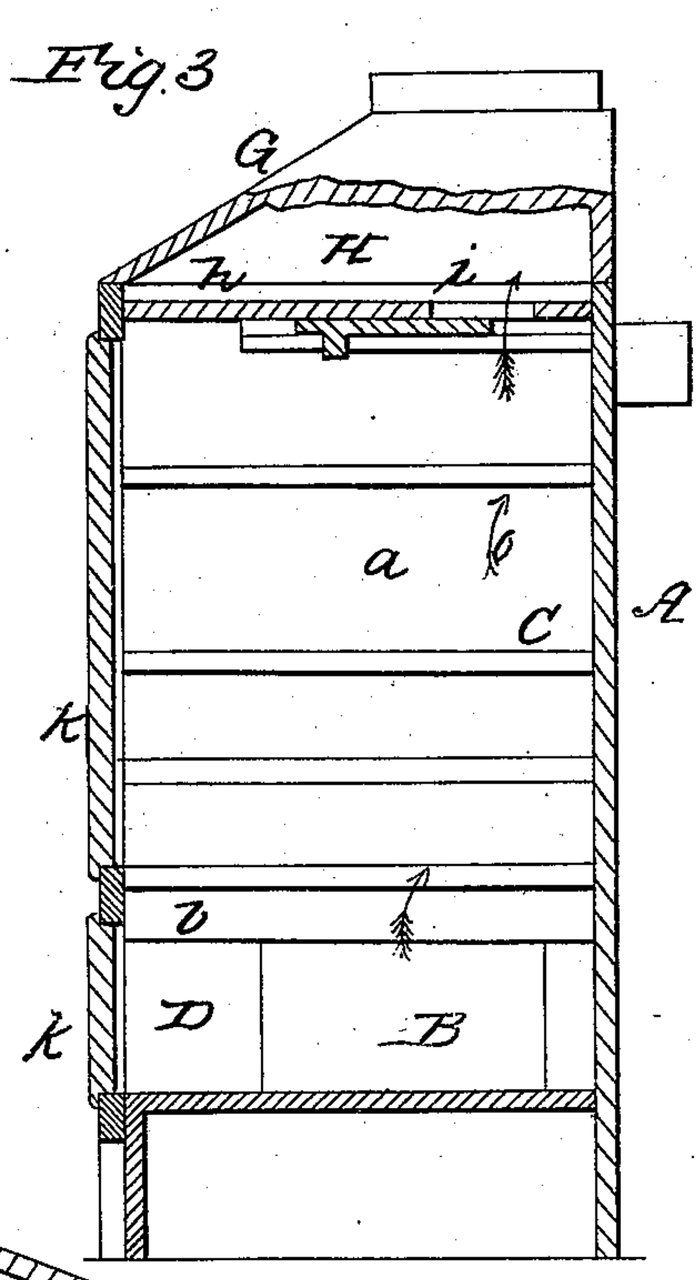
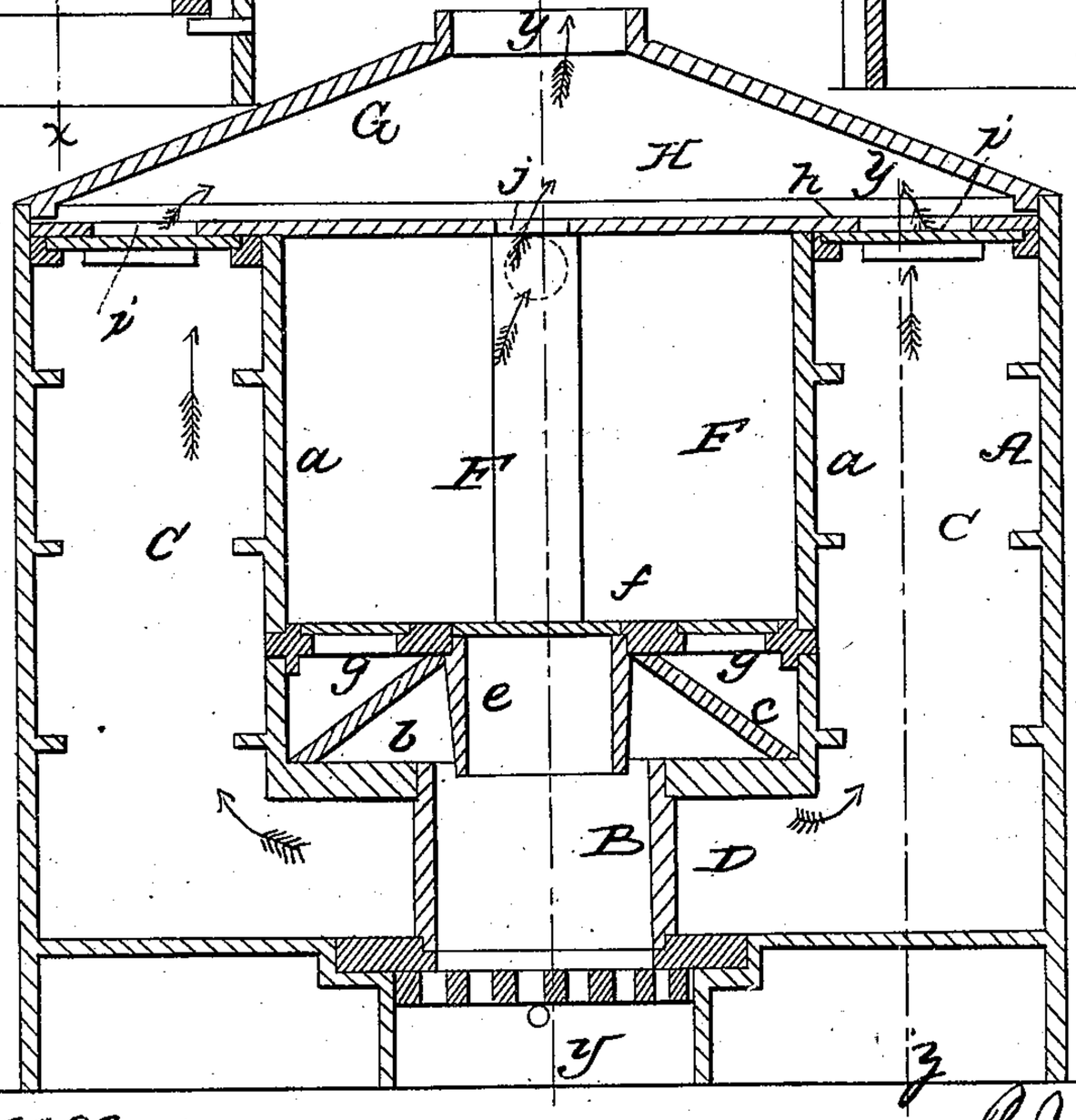


Fig. 1



Witnesses
J. Coombs.
L. B. Spencer

Inventor
P. J. Ackerman
Per Munn & Co
Attorneys.

UNITED STATES PATENT OFFICE.

P. J. ACKERMAN, OF PATERSON, NEW JERSEY.

COMBINATION OF COOKING-STOVE AND AIR-HEATING FURNACE.

Specification of Letters Patent No. 31,144, dated January 22, 1861.

To all whom it may concern:

Be it known that I, P. J. ACKERMAN, of Paterson, in the county of Passaic and State of New Jersey, have invented a new and Improved Cook-Stove and Air-Heating Furnace; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a vertical section of my invention taken in the line *x*, *x*, Fig. 2. Fig. 2 a vertical section of the same, taken in the line *y*, *y*, Fig. 1. Fig. 3 a vertical section of the same, taken in the line *z*, *z*, Fig. 1.

Similar letters of reference indicate corresponding parts in the several figures.

The object of this invention is to obtain a combined cook stove and air-heating furnace by a very simple and economical arrangement of parts which renders the cook stove more desirable than the ordinary ones while all the advantages of an air-heater are obtained.

The invention consists in placing the fire pot of the stove within the ovens; or, having the former in direct communication with the latter and having the ovens communicate with hot air pipes, all being arranged substantially as hereinafter described whereby the desired end is attained.

To enable those skilled in the art to fully understand and construct my invention I will proceed to describe it.

A, represents a rectangular metal case within which a fire pot B, is placed and *a*, *a*, are vertical partitions and *b*, a horizontal partition within the case. These partitions form two ovens C, C, and a passage D, by which they communicate with each other, see Fig. 1.

The body of the fire pot B, is within the passage D, and the top of the fire pot is encompassed by a conical flanch *c*, which is provided with a damper *d*. A cylindrical pot *e*, which projects down from a horizontal plate *f*, is placed concentric with pot B, and directly over it. The plate *f*, is provided with holes *g*, to receive cooking utensils and said plate forms the bottom of a rectangular chamber E, within the case A.

F, is a flue which passes direct from the space between the plates *b*, *f*, above the flanch *c*, up through the chamber E, at its back and out at the back of the case A, into the chimney just below the top plate *h*, of the case.

The pot *e*, is considerably smaller in diameter than B, and consequently the draft is allowed to pass upward at the outer side of the pot *e*, into the space below the conical flanch *c*, and through the damper *d*, into the space above it and thence into the flue F.

On the top of the case A there is placed a cap or cover G. This cap or cover forms a hot air chamber H, which communicates with the ovens C, C, by means of dampers *i*, *i*. The chamber H, also communicates with the chamber E, by an opening *j*. An ordinary pipe communicates with the chamber H, to convey the heated air to any part of the building.

From the above description it will be seen that the fire pot B heats the ovens C, C, as it is placed within the passage D, which forms a communication between them, and is not exposed to the external air so that no heat is lost by direct radiation. The warm air passes through the ovens C, C, and thence into the chamber H, the dampers *i*, *i*, being open, and is conveyed to any desired place by the pipe or pipes which communicate with chamber H. When the ovens are used for cooking purposes the dampers *i*, *i*, are closed. The heat from the chamber E also passes through the opening *j*, into chamber H. The ovens C, C, and chamber E are provided with doors *k*. By this arrangement it will be seen that all steam that escapes from the articles in process of cooking passes along with the hot air, none will pass into the apartment unless the door of chamber E be left open, and it will also be seen that the person or operator engaged in cooking will not suffer from the heat of the stove or fire pot as the latter is fully inclosed.

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

The combination and arrangement of the ovens C, C, fire pot B, and chambers E, H, as and for the purpose herein set forth.

P. J. ACKERMAN.

Witnesses:

JOHN I. GOETSCHIN,

PUIGINES SANDFORD.