KATUSSOWSKI & WIERZBICKI.

Domestic Oven.

No. 4,303. Patented Dec. 11, 1845.

Fig. 1

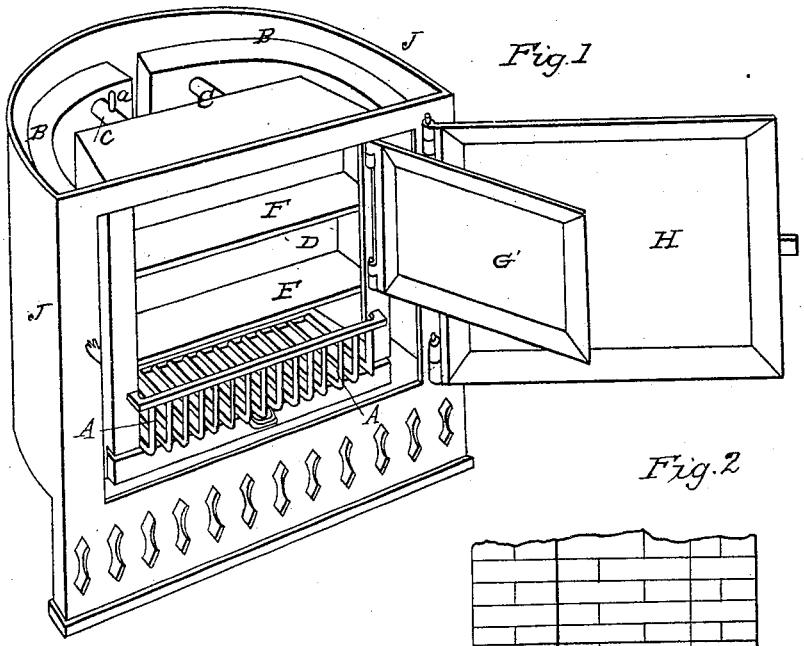



Fig. 2

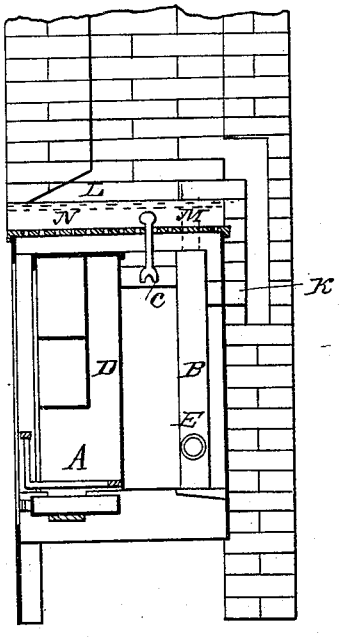
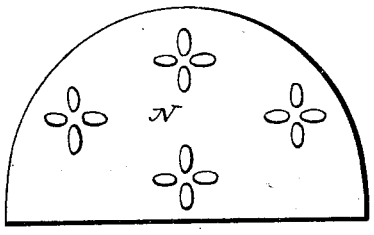



Fig. 3.



# UNITED STATES PATENT OFFICE.

HENRY KATUSSOWSKI AND F. P. WIERZBICKI, OF NEW YORK, N. Y.

## STOVE FOR FIREPLACES.

Specification of Letters Patent No. 4,303, dated December 11, 1845.

*To all whom it may concern:*

Be it known that we, HENRY KATUSSOWSKI and F. P. WIERZBICKI, of the city of New York, in the State of New York, have invented certain new and useful improvements in the manner of constructing stoves and grates for heating apartments and to which may be also appended an apparatus for baking or cooking; and we do hereby declare that the following is a full and exact description thereof.

We construct a grate of the kind usually employed in open fire-places for the burning of anthracite, which grate we suspend by means of straps, or ledges in such manner as that its back and sides shall not be in contact with the parts by which it is surrounded but shall be free to radiate heat from all its sides. The sides and back part of this grate are to be encompassed in whole or in part, by two radiating air heaters into which the gaseous products of combustion from the fire are to be introduced. These radiators, like the grates, are to be so suspended as that they shall be free to radiate heat from all their sides. Around these radiators we place an outer case of sheet or cast metal leaving a space for the passage of air between them; but as this apparatus is to be set in an ordinary fire-place the jambs and back of such fire-place may be made to constitute the case which is to surround the radiators. We provide a door by which the front of our grate may be closed in which case the air that passes in to feed the fire and that which is to be heated by the grate and radiators will enter in at the lower part of the apparatus, and the latter portion ascending within it will escape into the room through openings in the top of said apparatus prepared for that purpose.

In the accompanying drawings, Figure 1 is a perspective view of our stove and Fig. 2, a vertical section thereof from front to back through its center. In Fig. 1, it is shown as with the top plate removed which plate is represented separately in Fig. 3.

A A is a grate for containing the fuel, B, B, are the two radiating air heaters which consist of hollow vessels of metal into which the heated air from the fire is to be admitted on its way to the exit pipe and chimney. These radiators should extend down as low as the bottom and up as high as the top of the grate; C C are two pipes leading from the back of the grate into the radiators, the draft from the fire passing up behind a partition plate D, Fig. 2, to these pipes. At their lower parts the two radiators are connected together by a pipe as at E Fig. 2, and one of the pipes C C is provided with a damper as at *a* by which it may be closed when the fire has been lighted and is burning clearly. When so closed the heated air from the fire will descend in one radiator to the connection pipe E and up through the other to the escape pipe K.

When desired, a compartment for baking, or cooking may occupy the space in the grate above the fire as shown at F; a door G being used to inclose this compartment; and by means of a small pipe leading therefrom into one of the radiators, the vapors arising from the articles that are being cooked, may be carried off.

H is a door for inclosing the grate when desired;—when this is closed the air from the room will be admitted through spaces or openings as at I, I, below the fire; a portion of the air so entering will go to feed the fire, and another portion which is to be heated and returned into the room, will pass up between the grate and the radiators, and between the radiators and the outer shell or case J J of the stove or between them and the brick work when the apparatus is so set in a fire place as to cause the back and jambs to form the outer case. The top plate N Fig. 3 has openings made in it of any convenient or ornamental form, through which openings the air that has been heated will escape into the room, while that which has passed through the burning fuel will pass off through the escape pipe K into the chimney flue.

In setting this apparatus into a fire place, a plate, such as is shown in dotted lines at L, Fig. 2, is to be made to close the throat of, or entrance into the chimney, through which plate pipes M are to pass from the radiators; one of these is to be furnished with a valve or damper, for the purpose of causing the heated gases to circulate through the radiators as before described and under a like arrangement.

Instead of the plate L the top of the stove may be arched over with masonry, the object in either case being to conduct the heated air from both sides of the radiators B, B, into the apartment while the smoke from the grate is conducted into the chim-

ney flue through the pipes K, or M the warm air passing into the room through the top plate N. Proper shutters or slides are to be provided for the purpose of closing openings into the radiators which must be made in order to allow of the removal of ashes, &c., therefrom as in many other stoves; the parts of the grate exposed to the direct action of the fire are to be lined with fire brick, &c., in the ordinary way. The door H may have perforations closed by mica for the purpose of giving a view of the fire as is frequently practised.

Having thus fully described the manner in which we construct and arrange the various parts of our apparatus for heating apartments, and shown the operation of the same, what we claim therein as new and desire to secure by Letters Patent is—

The manner of combining and arranging the radiating air heaters, so that the air to be heated by them shall ascend on both sides of them, there being on the outside of and at a suitable distance from them, a shell, or case J J, or a casing of brickwork, performing the same office as set forth; and the fire place above the top plate N, being so inclosed by a suitable plate, or by masonry, as to cause the whole of the air heated by the radiators to pass into the apartment in the manner described.

We do not claim the use of a radiator, or radiators like those marked B, as new, such having been before used; but we limit our claim to that arrangement of them, by which they are made to heat an ascending current of air on each of their sides, for the purpose herein fully made known. We do not intend, however, by this claim to limit ourselves to the particular form of either of the parts of the said apparatus, but to vary these as we may think proper, while we attain the same end by an arrangement of parts substantially the same.

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F. P. WIERZBICKI.

Witnesses:
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