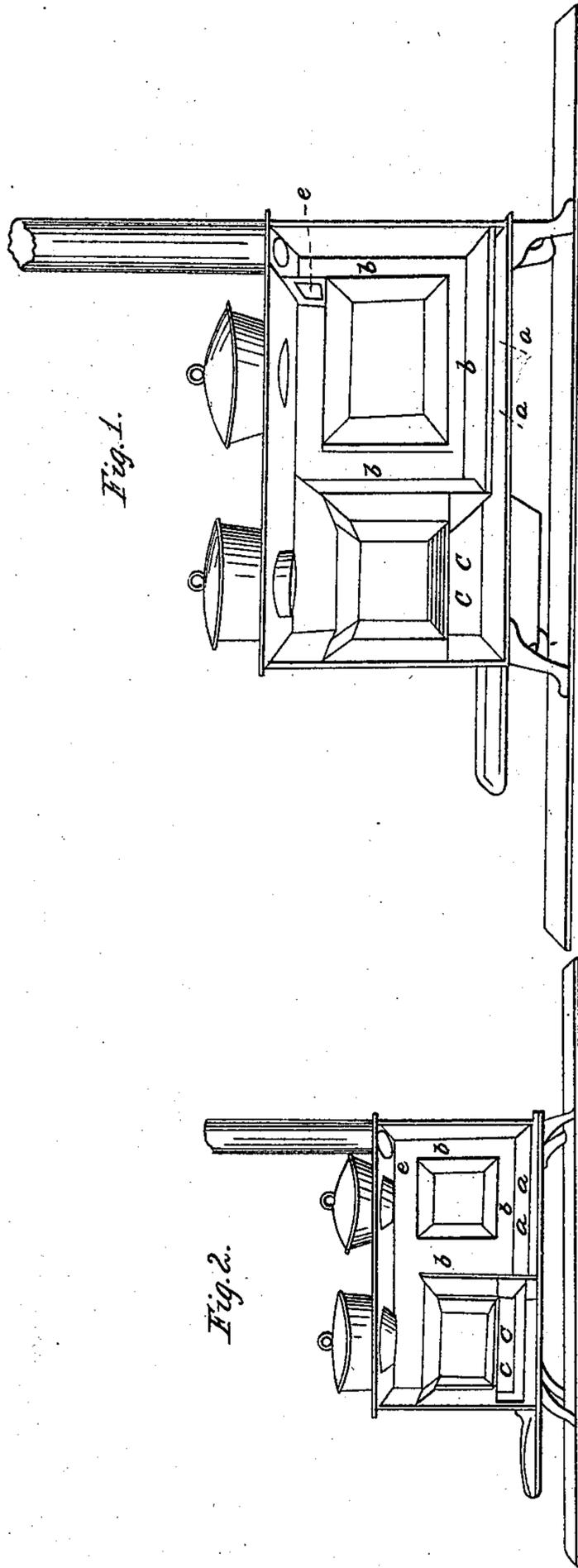


F. A. FICKARDT.

Stove.

No. 407.

Patented Sept. 25, 1837.



UNITED STATES PATENT OFFICE.

FREDERIC A. FICKARDT, OF EASTON, PENNSYLVANIA.

MODE OF SUPPLYING AIR TO WOOD AND COAL STOVES.

Specification of Letters Patent No. 407, dated March 25, 1837.

To all whom it may concern:

5 Be it known that I, FREDERIC A. FICKARDT, of the borough of Easton, in the county of Northampton and State of Pennsylvania, have invented a new and useful Improvement in Wood and Coal Stoves; and I do hereby declare that the following is a full and exact description—to wit:

10 An "air flue" for the conveyance of air to the body of the stove for the support of combustion, said "air flue" to be so constructed as to pass over the surface, or through the area of the "smoke flue" attached to the stove, having communication
15 at its one extremity, as of course its purpose renders necessary, with the air of the apartment or other atmosphere, and at the other, with the "air chamber" situate beneath the grate in the body of the stove.

20 The design and object of the "air flue" above described is to heat the air in its passage to the stove before it is brought in contact with the coal on the grate; (or wood, if wood be used,) and further, to extract
25 the requisite heat, from the body of escaping smoke,—and inasmuch as heated air, as a supporter of combustion, possesses great advantages over the ordinary cold drafts, in comfort, efficiency and economy, to wit,
30 in the smaller quantity of fuel it will hold in combustion, and in the certainty, steadiness, intensity and perfection of that combustion, it is readily supposable, as in the belief of your petitioner, it is really the fact,
35 that the present proposed plan of heating the air to be employed to the purposes of

combustion in stoves, by drawing the necessary amount of heat from that heat which is in combination with the smoke, (and which, in the act of running off by the
40 smoke flue, would otherwise be entirely lost,) will prove itself doubly an economy, over and above the various other advantages and conveniences before above enumerated.

The "air flue" as above described, in connection with the "smoke flue" as per above,
45 is designated in the drafts by Figure A, A, in both designs; in No. 1, as on the surface of the "smoke flue," in No. 2, as traversing the area of the same. 50

The smoke flue is represented by the portions, *b, b, b*, in both designs, and has there the figure and directions intended chiefly to be used. It may however be varied to
55 accommodate different ends. The present will answer most conveniently for domestic purposes, as cooking etc., affording room more readily for oven and boilers.

The "air chamber" had relation to in describing the several communications of the
60 "air flue," as being situate beneath the grate in the body of the stove, is marked *c, c*, in the designs of the drafts above said.

What I claim as my invention, and desire to secure by Letters Patent, is— 65

The "air flue" in the connections above given.

FREDERIC A. FICKARDT.

Witnesses:

JOHN DRINKHOUSE,
HENRY S. CAREY.