

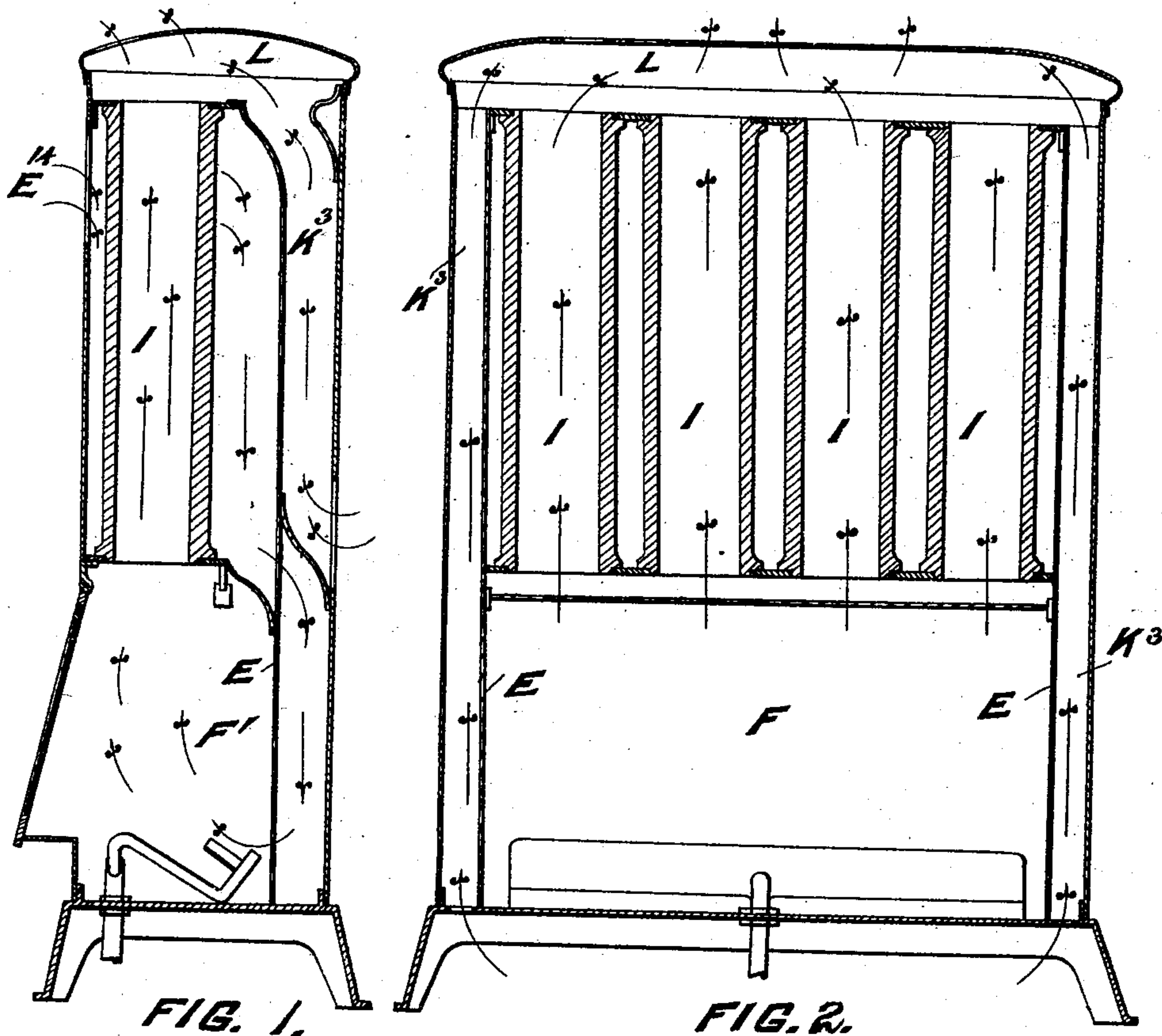
No. 637,231.

Patented Nov. 21, 1899.

E. BURDEN.
GAS OR OIL STOVE.

(Application filed May 19, 1899.)

(No Model.)



WITNESSES:
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UNITED STATES PATENT OFFICE.

EDWARD BURDEN, OF GRANTHAM, ENGLAND.

GAS OR OIL STOVE.

SPECIFICATION forming part of Letters Patent No. 637,231, dated November 21, 1899.

Original application filed February 21, 1899, Serial No. 706,375. Divided and this application filed May 19, 1899. Serial No. 717,472. (No model.)

To all whom it may concern:

Be it known that I, EDWARD BURDEN, engineer, a subject of the Queen of Great Britain and Ireland, and a resident of Desboro Villa, 5 Dysart road, Grantham, in the county of Lincoln, England, have invented certain new and useful Improvements in and Relating to Gas or Oil Stoves, (for which I have made application for Letters Patent in Great Britain, 10 No. 12,434, bearing date June 2, 1898,) of which the following is a specification, this application being a division of application Serial No. 706,375, filed February 21, 1899.

My invention relates to stoves, and has for 15 its object to provide a stove in which the air to support combustion is initially heated to secure perfect combustion and a stove in which effective provision shall be made for inducing circulation of air, so that thereby 20 warm air shall be disseminated throughout the apartment in which the stove is placed.

My invention consists in the arrangement and design of a gas or oil stove in which the air for supporting combustion is conducted from 25 an orifice or perforations in the outer casing at the upper part thereof downwardly to an air-chamber situated at the lower part or base of the stove, such air-chamber having a plate perforated so that the air may issue through 30 to the central space above where the burner or burners are provided, so that the air in its downward passage may be heated by the radiant heat from the walls of the passage, so as thereby to insure perfect combustion of 35 the flame or flames and so obviate the dissemination of deleterious products of incomplete combustion that generally ensue in the use of ordinary gas or oil stoves.

My invention is illustrated in the accompanying drawings, in which—

Figures 1 and 2 are respectively side and front sectional elevations of a stove in which a series of flue-tubes are employed.

In carrying my invention into effect ac-

45 cording to the figures I provide a tube or flue I, of refractory material, or a series of such tubes I, which are suitably held in position upon the burner-chamber F' and within the stove-casing E. The front face E¹⁴ of the casing is perforated for the admission of air, 50 so as to pass in contact with the exterior of the tubes I, thereby becoming heated and passing down along the back of the burner-chamber F', issuing from below to feed the flames. An air-circulating tube or space K³ 55 may be provided along the back thereof, through which air may pass from the back of the stove-casing and issue out through the top L.

Having now described my invention, what 60 I claim as new, and desire to secure by Letters Patent, is—

1. A gas or oil stove consisting of a central burner-chamber, an air-chamber above and at the rear thereof into which air passes from 65 the front of the outer casing said air-chamber discharging into the burner-chamber above the burners, and a plurality of flue-tubes superposed upon the burner-chamber and within the air-chamber substantially as 70 described.

2. A gas or oil stove consisting of a central burner-chamber an air-chamber above and at the rear thereof into which air passes from 75 the front of the outer casing said air-chamber discharging into the burner-chamber above the burners, and a plurality of flue-tubes superposed upon the burner-chamber and within the air-chamber, and air-circulating tubes at the rear of the air-chamber sub- 80 stantially as described.

In witness whereof I have hereunto set my hand in presence of two witnesses.

EDWARD BURDEN.

Witnesses:

WILLIAM EDWARD EVANS,
ALBERT EDWARD PARKER.