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HEATING SYSTEM.

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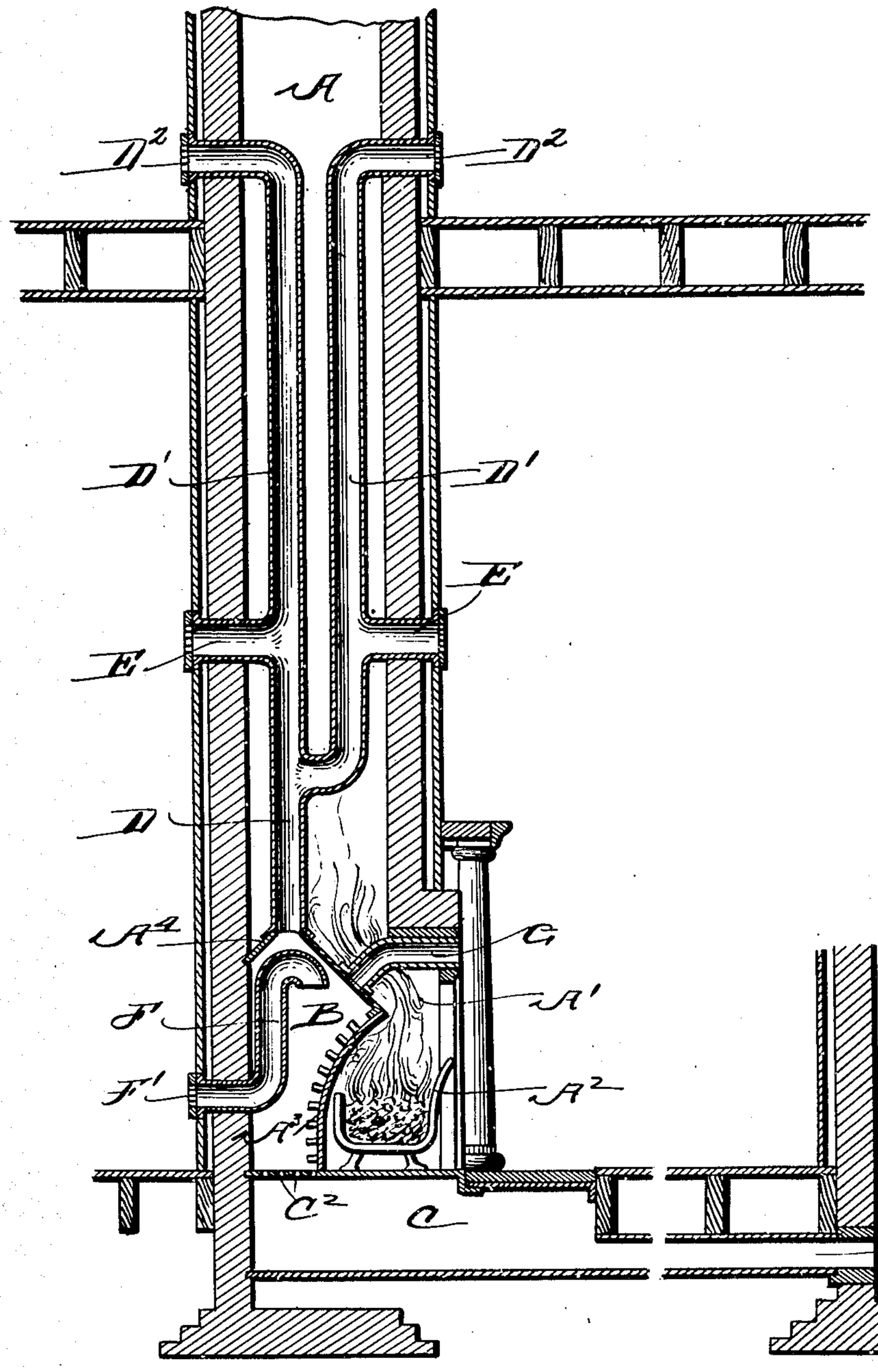
916,559. Patented Mar. 30, 1909.



WITNESSES:

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UNITED STATES PATENT OFFICE.

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HEATING SYSTEM.

No. 916,559. Specification of Letters Patent. Patented March 30, 1909.

Application filed June 5, 1906. Serial No. 320,273.

To all whom it may concern:

Be it known that I, JEFFERSON DAVIS JONES, a citizen of the United States, residing at Brownwood, in the county of Brown and State of Texas, have invented a new and useful Improvement in Heating Systems, of which the following is a specification.

This invention relates to a heating system designed especially for use in connection with open fire places in which grates are placed, and has for its object the more uniform distribution of heat through the room in which the said grate is placed by increasing the circulation of air throughout the room, and also the conveying of heat to other rooms adjacent to the one in which the grate is located.

The invention consists in the novel features of construction, hereinafter fully described, and pointed out in the claim, and shown in the accompanying drawings.

In the drawings A represents a chimney, the lower end of which communicates with an open fire-place A′, in which is arranged a grate A^2, back of which is placed a fire-back A^3, preferably curving forwardly and upwardly. A hood A^4, has its forward edge secured to or bearing upon the upper edge of the fire-back A^3, and extends rearwardly to the rear-wall of the chimney A. By means of this construction a heating chamber B, is formed at the rear of the grate and within the fire-place and in alinement with the chimney flue.

Below the flooring upon which the grate A^2 rests, is formed an air chamber C, and an air passage C′, conveys the outer air into this chamber from which it passes into the heating chamber B, through suitable perforations C^2, formed in the floor of the chamber B, which floor is a continuation of the flooring upon which the grate A^2, rests. A hot air pipe D, leads upwardly within the chimney flue from the hood A^4, and divides into branches D′, which at their upper ends discharge through registers D^2, into upper rooms. The pipes D′, are also provided with branches E, which discharge laterally into lower rooms one of which is the room in which the grate A^2, is located. From the other lower room leads an S-shaped pipe, the lower end of which leads from the said room at a point adjacent the floor as shown at F, and the upper end of which opens downwardly into the heating chamber B, and within the hood A^4. A pipe G leads from the heating chamber B and discharges heated air into the room in which the grate is located at a point immediately above the fire place.

In use the outer air will be drawn through the passage C′, into the air chamber C, from whence it will pass into the heating chamber B, and will be carried upwardly through the hot air pipe D, and discharged through the branches D′ and E. The warm air discharged through one branch E will circulate through said room as the cooler air will be forced into the pipe F and will be discharged downwardly into the heating chamber B where it will be heated and discharged through the pipe D and its branches. It will also be noted that the vertical portion of the pipe F is in the chamber B so that the air entering said pipe at its lower end will become heated as it passes to the upper end of said pipe. This heated current can escape only by moving downwardly into the upper hottest portion of the heating chamber. Owing to the reluctance of this downward movement, and its retarding effect on the ascent of the air entering the chamber from the passage C all of the air in said heating chamber will be more or less superheated, thus causing the discharge of hot, and not merely warm, air through pipe D and its branches.

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

A heating system of the kind described comprising in combination with a chimney flue and an open fireplace, a grate, a fire-back curving forwardly and upwardly, a hood A^4 having its forward edge bearing upon the upper edge of the fire-back and extending rearwardly to the rear wall of the chimney, thereby forming a heating chamber in the rear of the grate and within the fireplace, said heating chamber being in alinement with the chimney flue, means for admitting fresh air into the bottom portion of the said heating chamber, a hot air pipe leading upwardly through the chimney flue and communicating at its lower end with the heating chamber, said hot air pipe dividing into parallel branches, said branches com-

munication respectively with rooms upon opposite sides of the chimney flue and an S-shaped pipe, the lower end of which extends through the rear wall of the chimney and the upper end of which opens downwardly into the heating chamber and within the hood above mentioned said S-shaped pipe discharging air downwardly into the upper portion of the heating chamber.

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Witnesses:
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