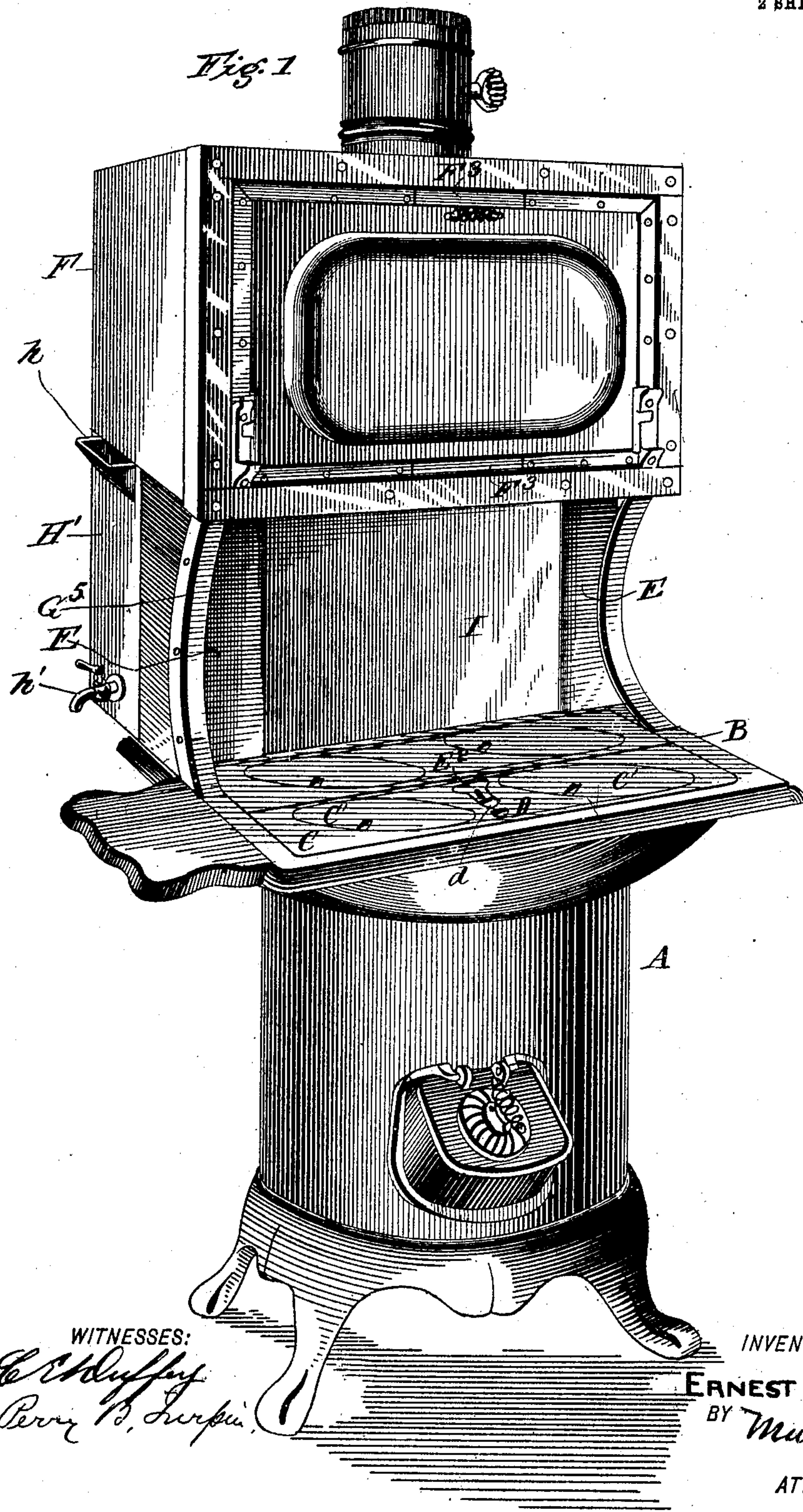


No. 832,534.

PATENTED OCT. 2, 1906.

E. C. COLE.
COOKING STOVE.
APPLICATION FILED FEB. 3, 1906.

2 SHEETS—SHEET 1.



WITNESSES:
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Perry D. Surpin

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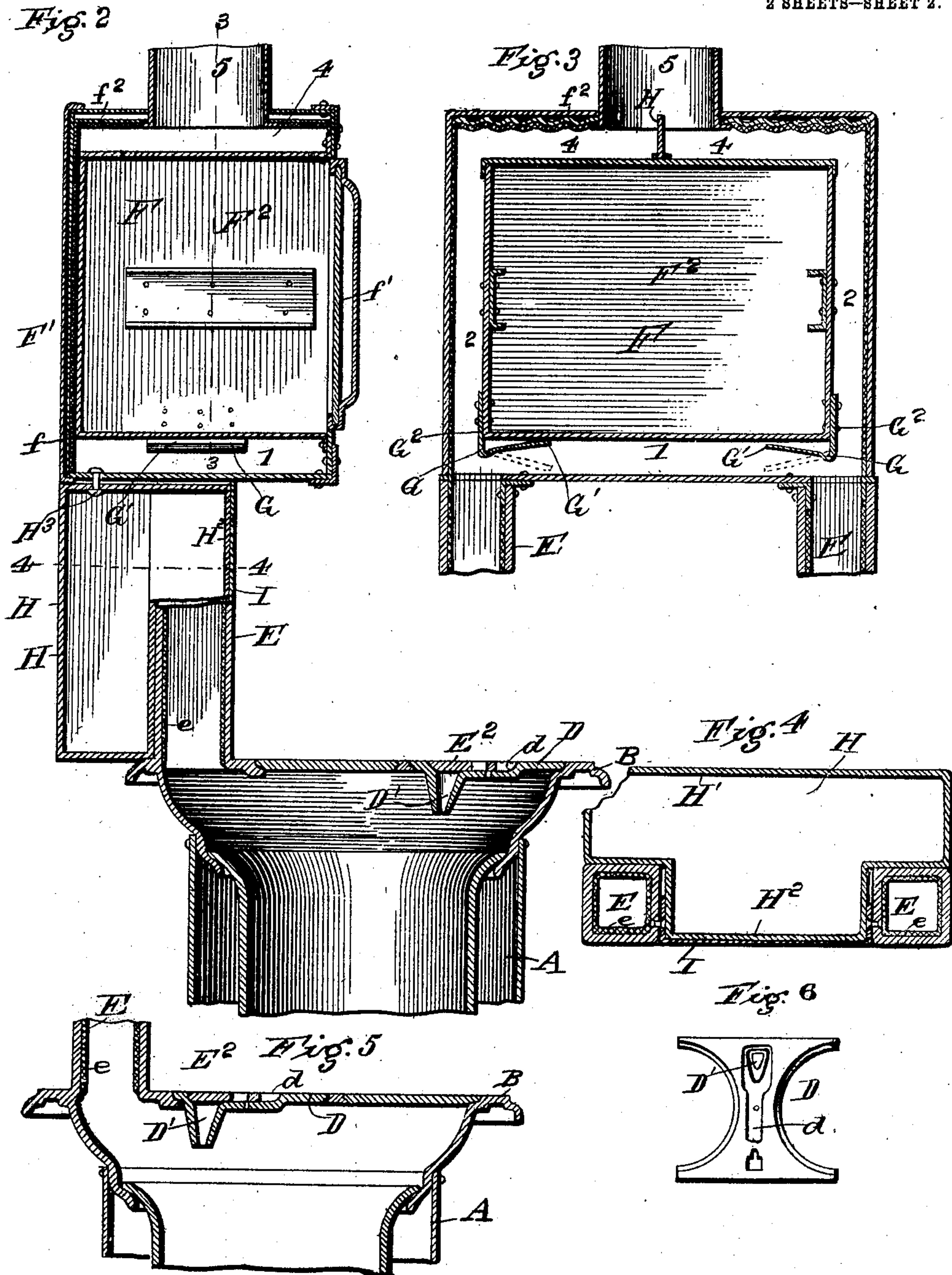
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UNITED STATES PATENT OFFICE.

ERNEST C. COLE, OF CHICAGO, ILLINOIS.

COOKING-STOVE.

No. 832,534.

Specification of Letters Patent.

Patented Oct. 2, 1906.

Application filed February 3, 1906. Serial No. 299,334.

To all whom it may concern:

Be it known that I, ERNEST C. COLE, a citizen of the United States, and a resident of Chicago, in the county of Cook and State of Illinois, have made certain new and useful Improvements in Cooking-Stoves, of which the following is a specification.

My invention is an improvement in cooking-stoves; and the invention consists in certain novel constructions and combinations of parts, as will be hereinafter described and claimed.

In the drawings, Figure 1 is a perspective view of a stove embodying my invention. Fig. 2 is a vertical longitudinal section thereof, partly broken away. Fig. 3 is a vertical section on about line 3 3 of Fig. 2. Fig. 4 is a cross-section on about line 4 4 of Fig. 2. Fig. 5 is a detail vertical section illustrating a different position of the blast-tube from that shown in Fig. 2, and Fig. 6 is a detail view illustrating the short center with the slide-cap for closing the blast-tube.

In carrying out my invention it will be noticed I provide a stove having the preferably cylindrical fire-box, ash-pit, or body A, whose top B is provided with key-plates C, having lids C' and short centers, one of which—such, for instance, as D—is shown as provided near one end with a depending hot-blast tube D', which depends within the body of the stove, may be utilized to deliver a blast of air onto the fire, and may be closed or regulated by a sliding cap E², seated in a recess d in the upper face of the section D, so it will lie flush with the upper face of said center, and which cap-plate may be moved back or forth to open, close, or restrict the open upper end of the blast-tube in order to regulate the amount of blast discharged to the fire. This short center with the hot-blast draft-tube, which in practice usually extends from three to three and one-half inches below the short center, may be utilized, in case the fire is burning too fast at the back of the fire-pot, to throw the draft to the front of the fire-pot by reversing the short center, as will be understood from Figs. 2 and 5, or, if desired, the short center at the front may be substituted for the short center at the back, as shown in Fig. 5, so that by means of the two interchangeable short centers (both reversible) a considerable range may be secured in the discharge of the blast to the fire within the body of the stove.

Upon the body of the stove, at the rear side

thereof, and in communication with the combustion-chamber thereof, I mount the upright flues E, which are preferably rectangular in cross-section and made of sheet-iron, lined at e with asbestos and conducting the heat, &c., to the high oven F, which is mounted upon the brackets G³ at the sides of the upright flues E and receives the heat discharged from the upright flues E in the use of the invention. This high oven F is preferably rectangular in horizontal section, as will be understood from Fig. 1 of the drawings, and comprises the outer casing F' and the inner box F², spaced apart at its bottom, sides, and top to form the bottom flue 1, side flue 2, and top flue 4, from the latter of which the smoke pipe or offtake 5 extends, as shown. The casing F' may be of sheet metal, and in practice I prefer to make the back plate f and the door f', which communicates with the box F², doubled and reinforced with asbestos, and I also prefer to make the top f² with an inner lining of corrugated metal backed by asbestos, as shown by Fig. 3 of the drawings.

As shown, the rectangular oven projects over at the back beyond the upright flues E, and the side flues 2 of the oven are of a width less than that of the upright flues E. Usually the upright flues are made about four inches wide and the side flues about three inches, so that there will be a column of heat about one inch by four which discharges below the inner box F² of the oven. To prevent flames and the like from discharging from the upper ends of the flues E directly against the bottom of the inner box F², as well as to secure a variation in the amount of heat discharged beneath the oven-box F², I provide deflector-plates G at the bottom of the box F² at its opposite sides and directly above the flues E and having the wings G', which extend beneath the oven-box and inwardly into the flue 1 and which may be bent, as will be understood from dotted lines in Fig. 3, in order to vary the amount of heat discharged from the flues E beneath the box F². In the specific construction shown the deflectors G are formed with the upright wings G² secured to the oven-box and depending below the same and with the inwardly-projecting lateral wings G', which may be bent up at an incline, as shown in full lines, Fig. 3, to discharge a considerable quantity of heat beneath the box F², or may be bent downwardly, as indicated in dotted lines, Fig. 3, to restrict the amount of heat

passing beneath the oven-box. It is not intended for the consumer or dealer to change these deflector-plates after they are shipped from the factory, as in practice the deflecting-plates are bent in the factory in such manner as will be best suited to the fuel of the country to which the stoves are shipped. When constructed as shown, the deflectors G operate efficiently in controlling the heat passing to the lower flue and also in preventing the direct contact of the flames, &c., passing up the flues E with the bottom of the box F².

In operation, as will be understood from Figs. 2 and 3, the heat passing out of the upper ends of the flues E will be distributed partly beneath the box F² and partly alongside the said box in passing to the offtake 5, and the box will be heated as is desired in securing the baking action, the deflecting-plate preventing too much heat from getting under the box and also protecting the box at the points where the flames would otherwise strike it.

On the top of the box F², I provide an upwardly-projecting plate H, extending from front to back centrally below the offtake 5, the purpose of which is to prevent the two currents of hot air from the opposite sides of the box F² coming together and interfering in such manner as to impede the draft and cause all of the heat to be taken on one side.

The box F² may have any suitable form of door, that shown being a drop oven-door, which will be found useful in the operation of the stove. Below and above the drop-door of the oven are provided laterally-sliding plates F³, which may be shifted laterally when it is desired to clean out the oven-flues.

By extending the top of the stove rearwardly and making the upright flues E square in cross-section space is provided at the back of the stove to receive a coffee-pot or small kettle when it is desired to set the same back in the use of the stove. It is preferred, however, to utilize this space for reception of the hot-water heater H, one end of which is shown in Fig. 1 and the cross-sectional form of which is presented in Fig. 4, in which latter figure, it will be noticed, the heater has a main or body portion H' and a

forwardly-projecting wing H², which latter fits between the flues E from the back and abuts against a cross-plate I, which extends between the said flues E at the front side thereof, as will be understood from Figs. 1 and 4 of the drawings. This heater H' has a lip or projection h at one end, whereby it may be filled, and also has a faucet h' to facilitate the withdrawal of the water whenever desired. This heater, it will be noticed, occupies space which is otherwise waste space, and in practice it may be fastened at its top to the shelf or oven, as indicated at H³ in Fig. 2, to prevent its tipping backward.

What I claim is—

1. The combination of the oven-casing, the upright flues communicating at their upper ends with the bottom of the said casing at its opposite ends, the oven-box in said casing and spaced apart therefrom and projecting at its ends partially over the upper ends of the upright flues and deflector-plates having upright wings secured to the oven-box adjacent to the lower end thereof and also provided with inwardly-projecting wings extending toward each other within the space below the oven-box, the inner extremities of said inwardly-projecting wings being free whereby they may be bent up or down and thereby adjusted to regulate the proportion of the hot-air currents directed below the oven-box, substantially as set forth.

2. The combination of the oven-casing, the upright flues communicating at their upper ends with the bottom of the said casing, an oven-box within and spaced apart from said casing, a heating-space being provided within the casing below the box, and deflector-plates interposed between the oven-box and the upright flues and having inwardly-projecting wings extending into the space below the oven-box and having free extremities adapted to be bent up or down within the space below the oven-box whereby they may be adjusted to regulate the proportion of the hot-air current permitted to pass below the oven-box, substantially as set forth.

ERNEST C. COLE.

Witnesses:

H. A. COLE,
Miss B. SAUNDERS.