2 Sheets—Sheet 1.

T. HENNEY.

Heating Stove.

No. 62,031. Patented Feb. 12, 1867.

FIG. 2

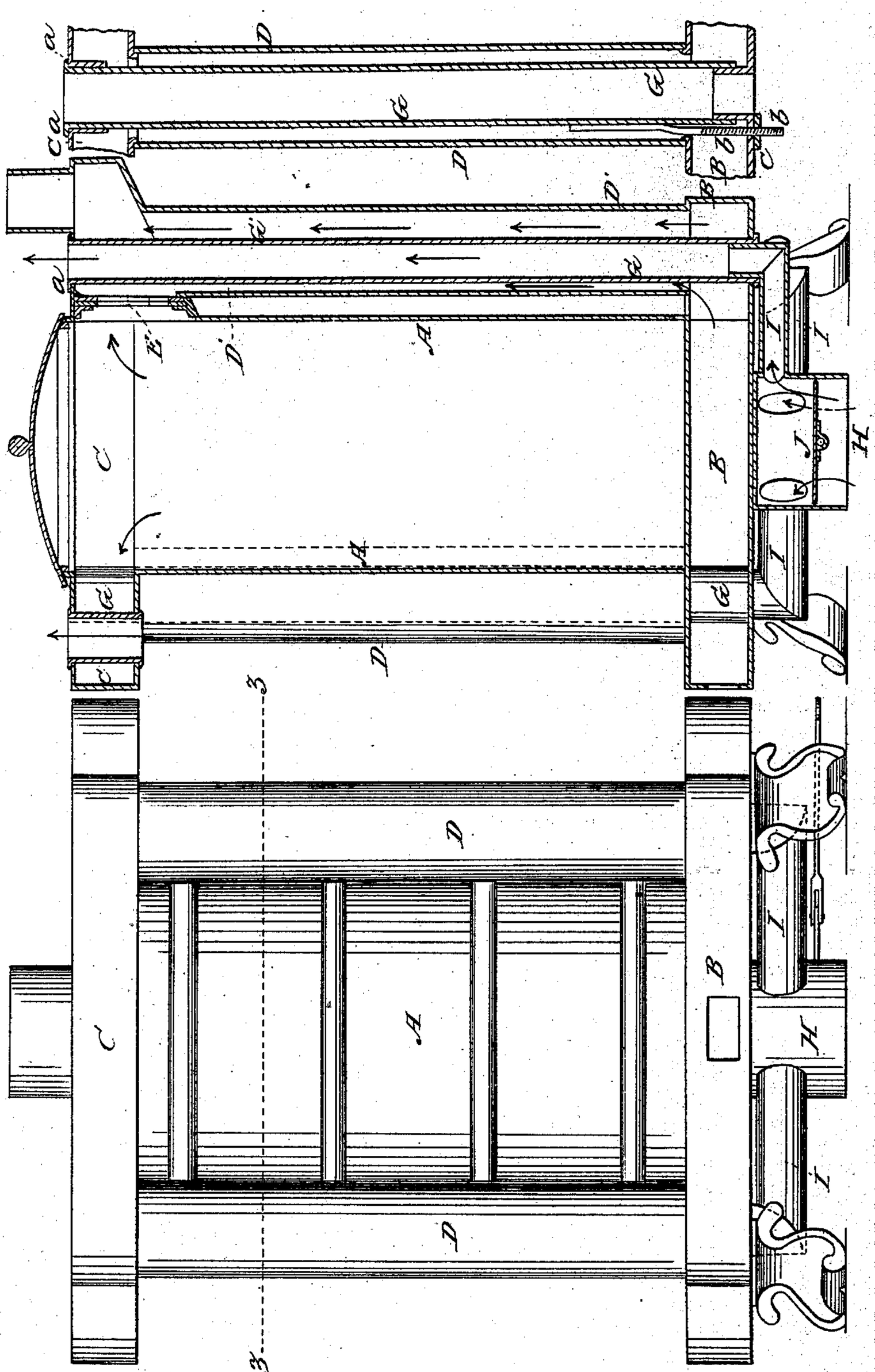

FIG. 7

FIG. 1

WITNESSES:

B. J. Campbell

Edwd Schaefer

INVENTOR:

Thos. Henney

by agts

Mason, Fenwick & Lawrence

T. HENNEY.

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FIG. 3

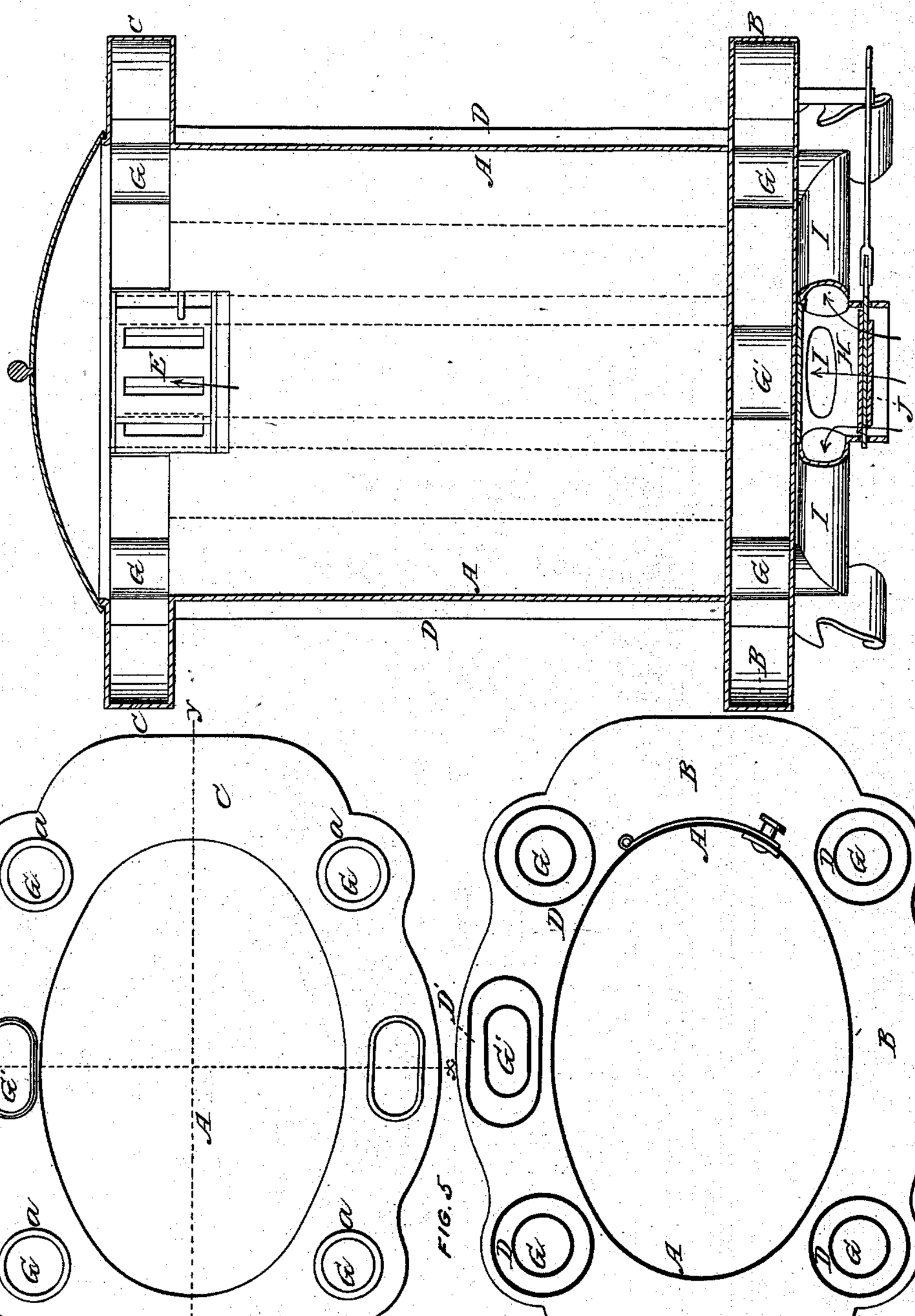

FIG. 4

FIG. 5

WITNESSES:

R. J. Campbell

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INVENTOR:

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United States Patent Office.

THOMAS HENNEY, OF DUBUQUE, IOWA.

Letters Patent No. 62,031, *dated February* 12, 1867.

HEATING STOVE.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, THOMAS HENNEY, of Dubuque, in the county of Dubuque, and State of Iowa, have invented a new and improved Stove; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a front view of my improved stove.

Figure 2 is a section through the stove taken in the vertical plane indicated by red line *x x*, in fig. 4.

Figure 3 is a section taken in the vertical plane indicated by red line *y y*, in fig. 4.

Figure 4 is a top view of the stove.

Figure 5 is a section taken in the horizontal plane indicated by red line *z z*, in fig. 1.

Figure 7 shows the manner of securing the air flues to the cap and base-sections of the stove.

Similar letters of reference indicate corresponding parts in the several figures.

This invention relates to certain novel improvements on parlor radiators, in which pipes are arranged around the central fire-drum for the purpose of obtaining a large heating surface when the direct flue is closed; said pipes being connected to and made to communicate with hollow base and cap-sections, so that the heated products of combustion will circulate freely through them previous to escaping through the exit-flue.

The nature of my invention consists in providing for conducting cold air through pipes, which are arranged within the pipes that form the smoke flues, said air being drawn in from out of doors, and introduced into the air pipes which are in the smoke pipes, through a pipe having a valve or regulating damper applied to it, and said air, after it becomes heated, being allowed to escape from its pipes at the top of the stove, as will be hereinafter described.

The invention further consists in having the upper parts of the pure-air flues exposed within the fire-chamber to the heated products of combustion, at all times, so that pure air will be caused to enter said pipes and circulate through them, even when the direct-draught passage is open, and the products of combustion do not pass down the smoke pipes, as will be hereinafter described.

The invention further consists in securing the pure-air pipes in place, by means of flanges formed on one end and short rods and nuts applied to the other end, so as to dispense with the use of long rods extending from the top to the bottom of the stove, as will be hereinafter described.

To enable others skilled in the art to undersand my invention, I will describe its construction and operation.

In the accompanying drawings, A represents the main cylinder of the stove, within which the fire is made, and B C represent respectively the base and cap sections of the stove, applied to the lower and upper ends of the cylinder A. D D represent four upright hollow pillars, which communicate with the hollow base B, at their lower ends, and with the hollow cap section C and cylinder A, at their upper ends, so that the heated products of combustion, rising in cylinder A, can pass over into chamber C, descend through said pipes into the base B, and thence rise through the escape pipe D′ at the back of the stove, and escape into the exit pipe. Near the upper end of the pipe D′ an opening is made leading into this pipe from the cylinder or fire-chamber A, which opening is provided with a sliding damper, E, for closing it when it is desired to cause the heated products of combustion to circulate through the stove. When it is desired to have a direct draught, the damper E is opened, and the products of combustion pass directly into the pipe D′ and escape. Within each one of the upright pipes D is a central pipe, G, the upper end of which passes through the top plate of section C, and the lower end passes through the bottom plate of the stove. The several pipes G communicate at their lower ends with a central pipe, H, by means of branch pipes I, so that pure air can be introduced from out doors into the pipes G, heated, and then allowed to escape from the top of the stove into the room. The upper ends of the air pipes G are flanged, as shown at *a*, figs. 4 and 7, so that the flanges fit snugly upon the top plate of section C. The lower ends of these pipes have short screw-rods *b* secured firmly to them, which rods pass down through the bottom plate of section B and receive nuts, *c*, upon them, by which the pipes D D′ and G, and the top and bottom sections B and C are firmly secured together. This arrangement dispenses with long tie-rods and allows the pipes G to be used instead. It will be seen by reference to figs. 2, 3, and 7, that the upper parts of the pure-air pipes G are at all times exposed to the action of the fire in the chamber A, whether damper E be open

or closed, consequently there will always be a draught of pure air through said pipes when the damper J, in central pipe H, is open. The pipe G′, which is in exit pipe D′, is cut off from the direct heat when damper E is closed. When damper E is closed the highly heated products of combustion will pass over into chamber C, and descend through the pipes D, thus communicating heat to the pipes G, and warming the air as it rises through these latter pipes. The products of combustion escape into the chamber B, and thence pass up through pipe D′ and heat the pipe G′.

The great object of my invention is to effect the heating of pure air drawn in from out doors in a parlor radiator of the form herein shown and described, and to do this without changing the general form and construction of such stove. I am aware that the general principle of warming pure air, and allowing it to escape into a room in which the stove is used, by passing such air through smoke flues, is not new, and therefore I do not make such claim.

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

1. The combination of the branch pipes I, inlet pipe H, pipes G G′, damper J, central fire-cylinder A, hollow base B, cap section C, and the pipes D D′, all arranged and operating substantially as and for the purpose described.

2. The combination of pipes H I with the pipe G′ and D′, applied to a stove composed of sections A B C, and pillars or pipes D, substantially as described.

3. Providing for securing the several movable sections of the stove together by means of rods, nuts, and flanges, applied to the air pipes G, substantially as described.

4. I claim the arrangement of air pipe G′, opening at the top and bottom of the stove, and passing through the exit pipe D′, and damper E, substantially as described.

THOMAS HENNEY.

Witnesses:

W. C. CHAMBERLAIN,

E. T. HEALEY.