

(No Model.)

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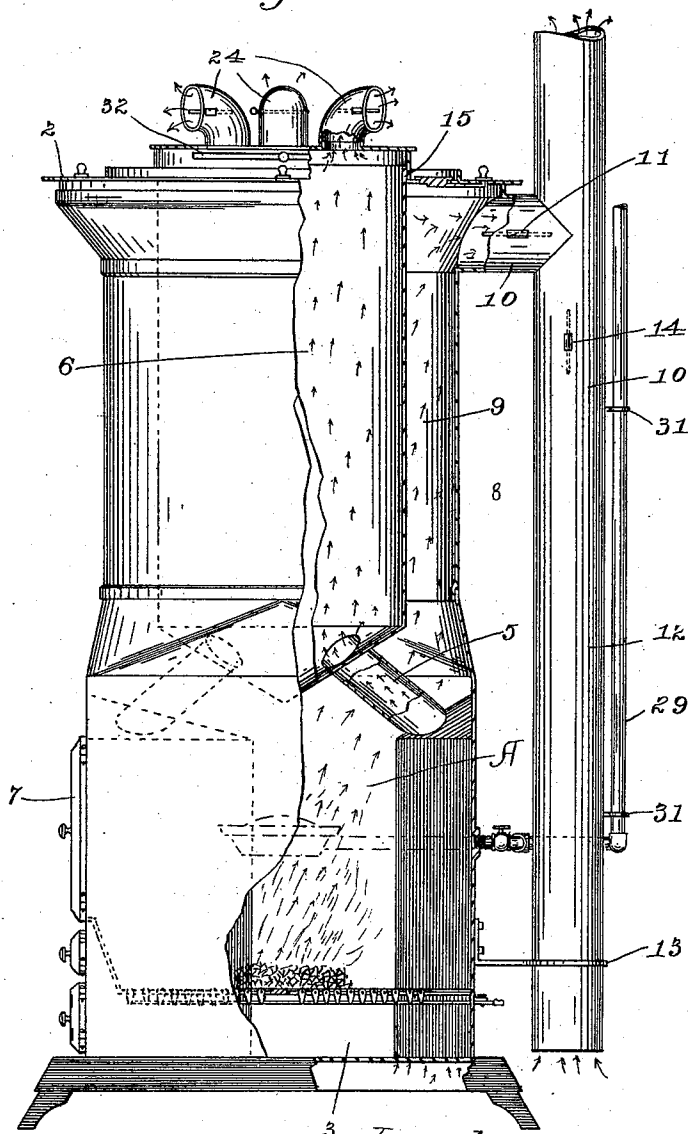
J. FLEMING.

DOUBLE DRUM SECTIONAL HEATING STOVE.

No. 576,049.

Patented Jan. 26, 1897.

Fig. 1.



Witnesses:

V. J. Badbury.
H. S. Johnson.

Inventor:

James Fleming,

per: T. D. Mervin
Attorney.

(No Model.)

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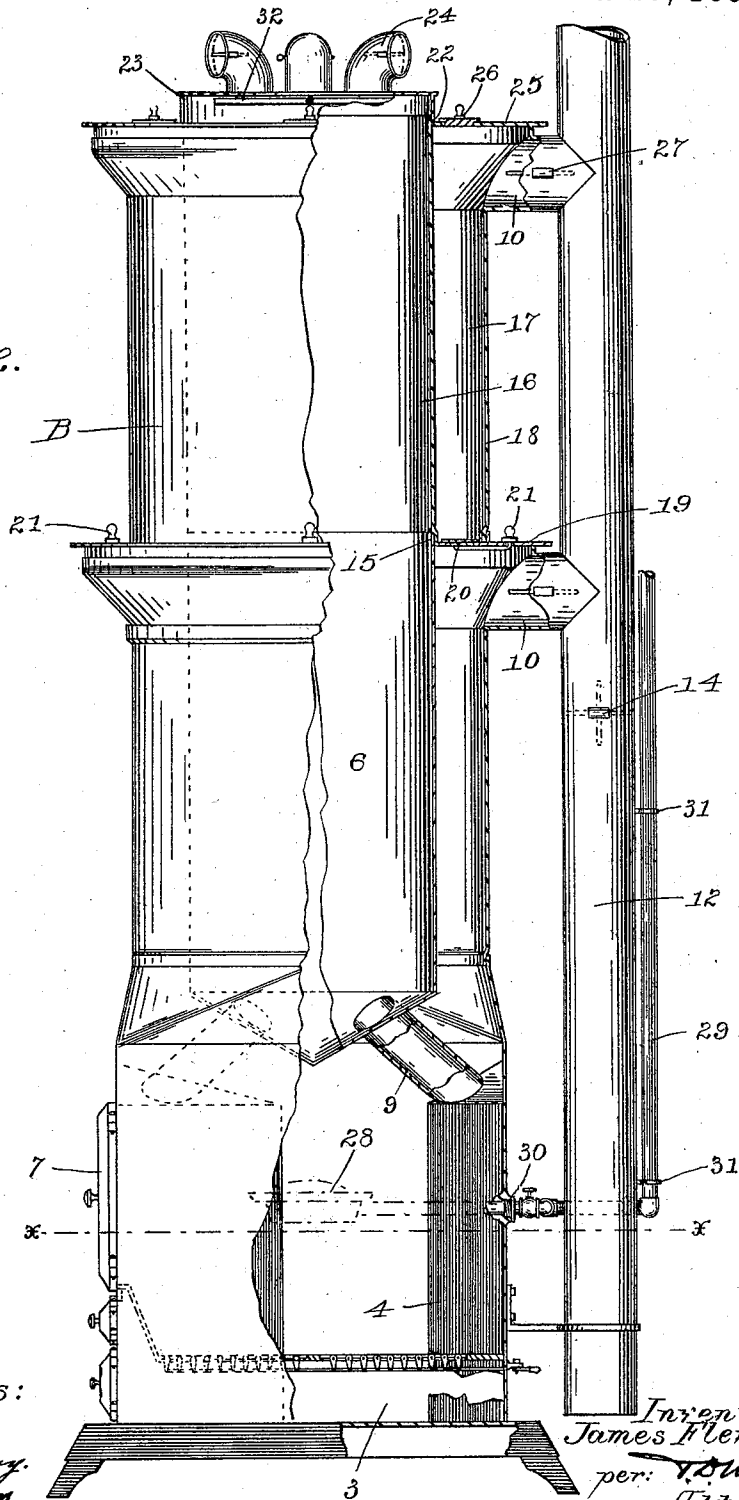
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No. 576,049.

Patented Jan. 26, 1897.

Fig. 2.



Witnesses:

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(No Model.)

3 Sheets—Sheet 3.

J. FLEMING.

DOUBLE DRUM SECTIONAL HEATING STOVE.

No. 576,049.

Patented Jan. 26, 1897.

Fig. 3.

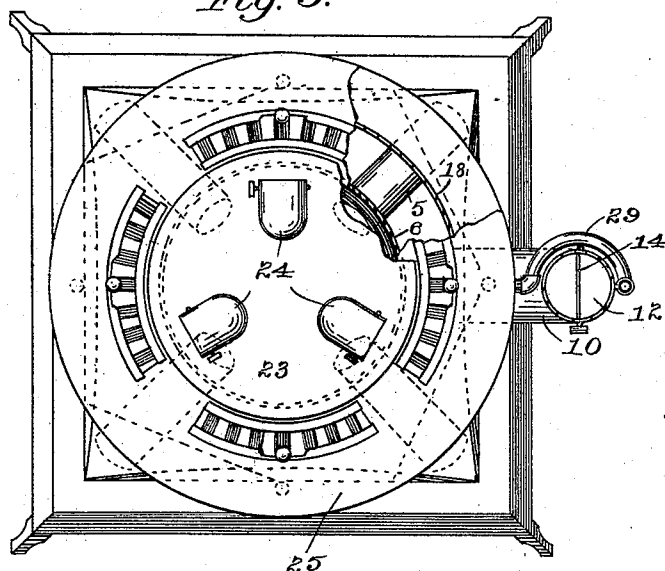
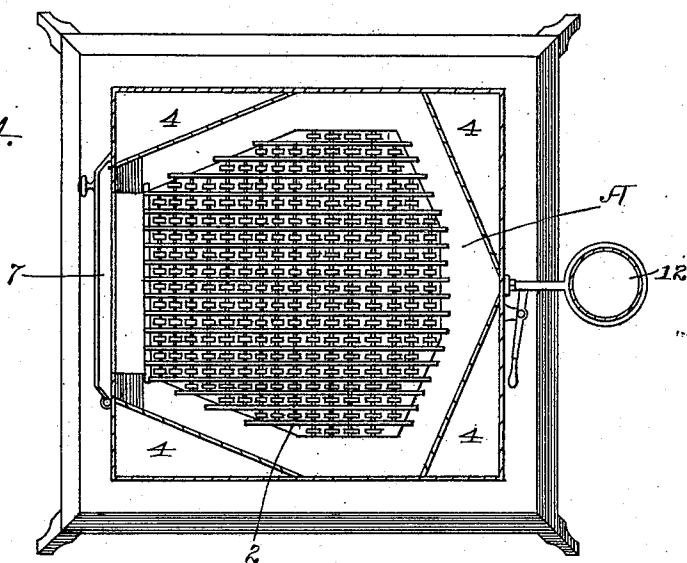


Fig. 4.



Witnesses:

H. J. Gooding.
A. S. Johnson.

Inventor: *James Fleming.*

per: *T. D. Mearns.*
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UNITED STATES PATENT OFFICE.

JAMES FLEMING, OF SHAKOPEE, MINNESOTA.

DOUBLE-DRUM SECTIONAL HEATING-STOVE.

SPECIFICATION forming part of Letters Patent No. 576,049, dated January 26, 1897.

Application filed October 16, 1896. Serial No. 609,081. (No model.)

To all whom it may concern:

Be it known that I, JAMES FLEMING, of Shakopee, Scott county, Minnesota, have invented certain Improvements in Double-Drum Sectional Heating-Stoves, of which the following is a specification.

My invention is an improved construction of double-drum sectional heating-stove, being, more specifically, an improvement upon my former patent, No. 564,189, of July 21, 1896.

By means of my improved construction, as hereinafter more particularly described, the heating capacity of my stove, as covered by said patent, is greatly increased and a much larger range of regulation is possible.

In the accompanying drawings, forming part of my specification, Figure 1 is a side elevation of my improved stove, partially broken away to show the interior construction. Fig. 2 is a similar view showing the stove provided with my improved extension-top. Fig. 3 is a top elevation of the same, partially broken away; and Fig. 4 is a horizontal cross-section taken on line *xx* of Fig. 2.

In the drawings, A represents the fire-box of the stove, provided with the grate 2 and having underneath the same the space 3, which serves to admit air to the fire-box and into which the ash-pan may be placed to receive the ashes from the grate. In each of the four corners of the stove is the triangular air-duct 4, opening to the outer air at the bottom of the stove, and each connected, by means of a pipe 5, with the air-chamber 6, centrally arranged above the fire-box.

Each of the air-ducts 4 has one of its sides adjacent the right-angled corners considerably longer than the other similar side, so as to cover a greater amount of one wall of the fire-box than of the other wall, the object being to leave as much as possible of the side walls uncovered to allow freer radiation of heat and to leave sufficient room in the front wall for the door 7.

The air-chamber 6 is arranged some distance inside of the outer wall 8 of the stove, forming a space 9, leading from the fire-box to the smoke-outlet pipe 10, which is provided with the controlling-damper 11. The smoke-pipe is formed with an extension 12, extending downward adjacent the rear of the

stove to approximately the bottom and being supported by a bracket 13, connected to the rear of the fire-box. This extension-pipe is provided with a controlling-damper 14 and is open at the bottom, so as to serve the double purpose of a check or equalizing pipe where different kinds of fuel are used and also serving as a means of ventilation for the room.

The air-chamber 6 projects above the top of the stove, forming a collar 15, over which is adapted to be fitted the extension-section B. This extension-section is formed with a central chamber 16, registering with the air-chamber 6 in the body of the stove and forming an annular space 17 between it and the outer wall 18, registering with the space 9 in the stove proper. In order to allow communication between the space 9 between the walls of the stove and the space 17 between the walls of the section B, I provide the crown-sheet 19 with openings 20, adapted to be closed by damper-slides 21.

The air-chamber 16 projects above the crown-sheet 25, forming a collar 22, over which is adapted to be fitted a cap 23, from which cap lead pipes 24, by which the heat may be conducted to the different rooms. This cap 23 is adapted, when the section B is removed, to be placed over the collar 15 upon the stove to answer the same purpose as when used in connection with the section B, and is provided with damper-openings 32, permitting further regulation of the heat. The crown-sheet 25 of the extension-section is also preferably provided with dampers 26, which may be opened with liquid fuel to increase the heat. The space 17 between the walls of the extension-section B is also connected with the smoke-outlet pipe 10, and is provided with the intermediate controlling-damper 27.

It will be evident from the foregoing description that a large range of regulation is possible. For instance, with the parts set up, as shown in Fig. 2, the dampers 21 may be opened, establishing communication between the space 9 of the stove and the space 17 of the extension-section. When this is done, I preferably close the valve 11, leading from the space 9 into the smoke-outlet pipe, allowing the products of combustion to escape from the space 17 into the smoke-outlet pipe. Further regulation is permitted by means of

the damper 14 in the pipe 12 and by means of the dampers 26 in the crown-sheet of the extension-section B. I also, without disconnecting the extension-section and stove, may prevent the products of combustion passing through said section by closing the damper between the spaces 9 and 17 and opening the damper 11, leading into the smoke-outlet. I also may, if desired, remove entirely the extension-section, placing the cap 23 upon the top of the stove or entirely removing the cap, so that the air-chamber will open into the room.

In Figs. 1 and 2 the stove is shown fitted with an oil-burner 28, which is connected with the source of supply by means of the pipe 29. The burner 28 is preferably supported above the fire-box grate, so as to be in close proximity with the air-chamber 6, the supply-pipe 29 passing through an opening 30 in the rear wall of the fire-box and being supported upon the extension-pipe 12 by means of brackets 31. The extension-pipe 12 is of particular importance when the stove is used in connection with oil or gas, as it is then necessary to open the damper in the pipe to equalize or check the draft, which causes it to also serve as a ventilator.

By means of the improvements of construction, consisting of the extension-section B and the other described features, I have found that a great deal more heat is obtained with the same amount of fuel than with the use of my ordinary construction. The section is similarly constructed with and fits tightly on the stove, so that when set up, as shown in Fig. 2, it presents the appearance of an integral part of the stove-body. Of course I am aware that the use of drums in connection with different constructions of stoves is not new, but it will be evident that my improvement is not a drum, but when set up is a main division of the stove, the heat from which, however, can be cut off by means of the aforesaid dampers, and thus allowed to circulate through the stove proper only.

I claim—

1. The combination with a stove of the class described, having a rectangular fire-box and a centrally-arranged air-chamber above the same forming an annular air-space between it and the outer wall of the stove, of the extension-section detachably fitted to the top of the stove, and having a central air-chamber and surrounding space, registering with the

air-chamber and annular space in the stove-body, the connection between the annular space in the stove-body and the smoke-pipe, the connection between the similar space in the extension-section and the smoke-pipe, and the damper interposed between said spaces, whereby the products of combustion may be permitted to circulate through both the stove and section, or may be cut off from said section by the closing of the intermediate damper.

2. The combination with a stove of the class described, provided with a rectangular fire-box, the centrally-arranged air-chamber arranged above the same, and the annular space around the same connected with the fire-box, and also having connection with the smoke-outlet, of the extension-section adapted to be detachably fitted to the top of the stove, said section being provided with a central air-chamber registering with the air-chamber of the stove, and with an annular space between said chamber and its outer wall corresponding with the similar space between the chamber and the wall of the stove, the valve interposed between said annular spaces, the valve-controlled openings in the crown-sheet of the extension-section, and the cap removably fitted over the top of the central air-chamber of said extension-section, and provided with heat-conducting pipes.

3. The combination with a stove of the class described, having an air-chamber centrally arranged above the fire-box forming an annular space between it and the outer wall of the stove connecting with the fire-box, of the extension-section adapted to be detachably fitted to the top of the stove, and having a central air-chamber and a surrounding annular space, registering with the air-chamber and surrounding space in the stove-body, the damper-controlled opening between said annular spaces, the damper-controlled openings in the crown-sheet of said section at the top of its annular space, the cap adapted to removably fit over the top of the central air-chamber of said section, and provided with heat-conducting pipes, and the damper-controlled openings in the wall of said cap.

In testimony whereof I affix my signature in presence of two witnesses.

JAMES FLEMING.

Witnesses:

H. S. JOHNSON,
MINNIE L. THAUWALD.