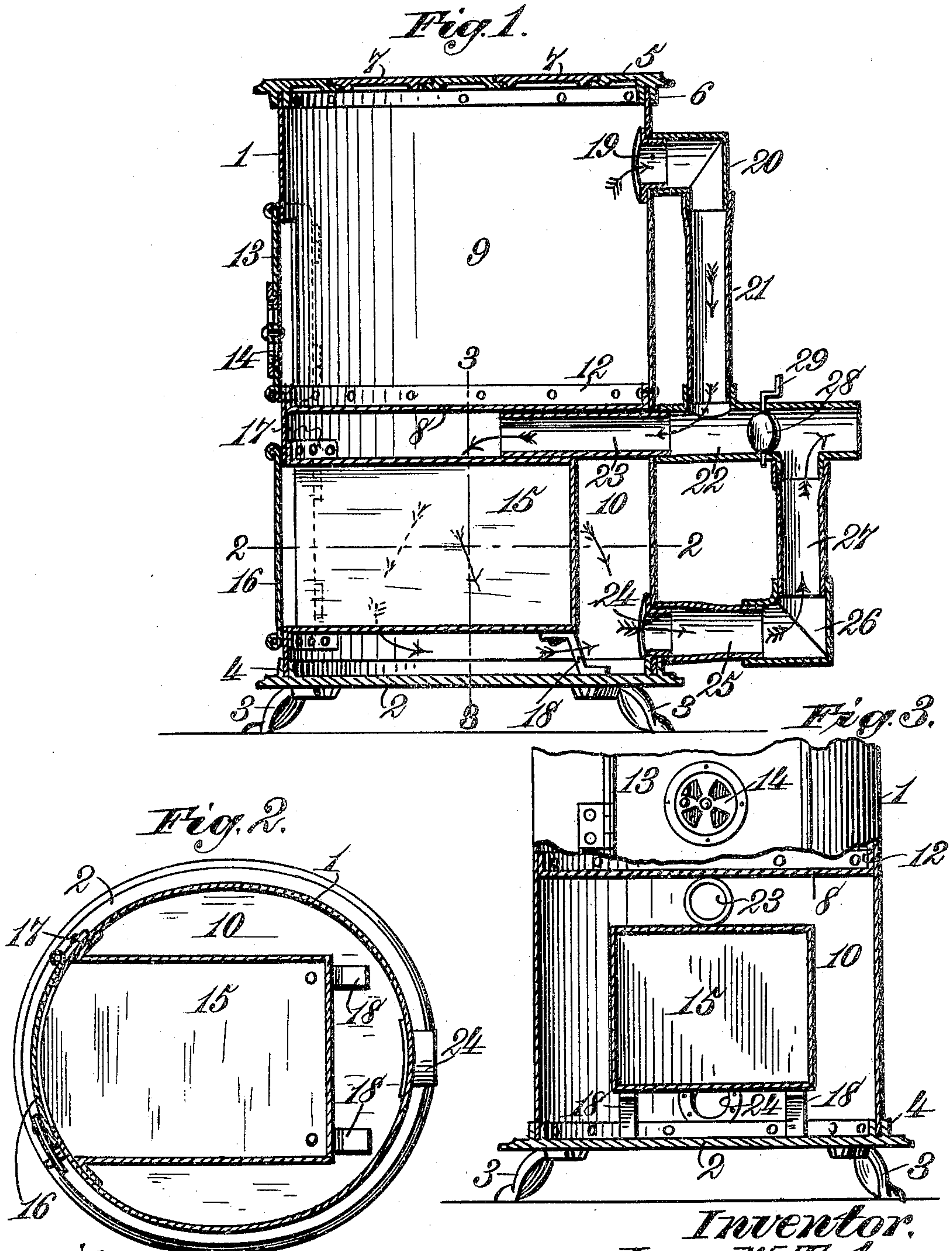


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PATENTED FEB. 13, 1906.

J. W. TATUM.
COMBINED HEATING AND COOKING STOVE.
APPLICATION FILED APR. 14, 1905.



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UNITED STATES PATENT OFFICE.

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COMBINED HEATING AND COOKING STOVE.

No. 812,381.

Specification of Letters Patent.

Patented Feb. 13, 1906.

Application filed April 14, 1905. Serial No. 255,645.

To all whom it may concern:

Be it known that I, JAMES WILLIAM TATUM, a citizen of the United States, residing at Durham, in the county of Durham and State of North Carolina, have invented new and useful Improvements in a Combined Heating and Cooking Stove, of which the following is a specification.

My present invention relates to certain new and useful improvements in combined heating and cooking stoves, and more particularly to that type of stove especially adapted for burning wood as fuel.

The prime objects of the invention are to provide a stove of the character indicated that is extremely simple in construction, cheap to manufacture, and efficient in operation.

Other objects due to the special construction and arrangement of the various parts of the stove will appear in the detailed description that follows this statement.

Briefly and generally stated, the invention comprises a stove body or shell divided into two compartments by means of a horizontally-arranged transverse partition, which extends entirely across the said body or shell, thus forming an upper combustion or fuel chamber and a lower oven-chamber and in providing externally-arranged pipes or flues that communicate with the said fuel and oven chambers with a suitable damper, whereby the products of combustion may be caused to pass from the fuel-chamber directly to the chimney or into the oven-chamber and from thence to the chimney.

In order to enable others to fully understand, make, and use my said invention, I will now proceed to describe the same in detail, reference being had for this purpose to the accompanying drawings, in which—

Figure 1 is a vertical sectional view of a stove constructed according to my invention. Fig. 2 is a horizontal sectional view taken on the line 2 2 of Fig. 1; and Fig. 3 is a front elevation, partly in section, the said section being taken on the line 3 3 of Fig. 1.

Referring to the drawings, the reference-numeral 1 designates the shell or body of the stove, which may be conveniently made of sheet metal and which may be either circular, oval, rectangular, or of any other suitable shape in cross-section. This shell 1 is closed at its lower end by means of a bottom 2, sup-

ported upon legs 3. The bottom may be made of cast-iron or of sheet-iron, as desired. In the present instance I have shown the bottom as made of cast-iron, having upwardly-extending annular flanges, 4 slightly separated from each other to provide an annular groove in which the lower open end of the shell 1 is seated. The parts may then be riveted together or secured in any other suitable manner.

The reference-numeral 5 designates the top of the stove, which may be made of sheet metal or of cast metal. In the present instance I have shown the top as formed of a solid casting having depending annular flanges 6, separated from each other to provide an annular groove in which the upper end of the shell 1 is seated. The top and shell may be suitably connected by means of rivets or otherwise. I prefer to provide the top 5 with the ordinary stove-holes, which may be closed by removable cover-plates 7, such as are usually employed in cooking-stoves. By this construction it will be apparent that the top of the stove may be employed for cooking purposes.

The shell or body of the stove 1 is divided by means of a transverse horizontal partition 8 into two compartments 9 and 10, the upper being the fuel-compartment or combustion-chamber and the lower the oven-chamber. This transverse partition is preferably formed of sheet metal having an upturned annular flange 12, which may be riveted to the shell or otherwise secured thereto. A suitable opening is provided in the shell leading to the fuel-compartment 9, said opening being closed by a door 13, provided with any suitable form of damper 14, which in the present instance is shown of the ordinary rotary type.

In the lower or oven compartment 10 I provide an oven which consists of a sheet-metal box-like structure 15, closed on all sides except the front, which is open and which registers with an opening formed in the shell directly below the fuel-opening before mentioned. This opening is closed by a suitable door 16. The oven 15 is in dimensions considerably smaller than the compartment 10 and is constructed and arranged therein so that the products of combustion passing from the fuel-compartment in the manner presently to appear may circulate entirely around the same. The box-like

structure comprising the oven may be conveniently attached to the shell by means of flanges 17 extending from the front or open end thereof, said flanges being riveted to the shell, as shown, and supported at its rear end by means of feet or legs 18, which rest upon the bottom 2 of the stove.

In order to provide for the outlet of the products of combustion from the combustion-chamber and for causing said products to pass either through the oven-chamber or directly to the chimney, I provide the following means, which, it will be noted, are located entirely outside the stove proper and which means may consist of ordinary stove-pipe-sections and stovepipe-joints found upon the market.

In the upper part of the shell 1, leading from the combustion-chamber, is an opening in which is securely fitted a thimble 19. Fitting over the outer projecting end of the thimble 19 is a stovepipe-elbow 20, and to the downwardly-extending end of said elbow is a pipe-section 21, said section coupling at its lower end with a horizontally-arranged pipe-section 22, the latter joining with a pipe-section 23, that passes through an opening in the shell leading to the oven-compartment, said pipe-section 22 preferably extending far enough into the compartment 10 to discharge the products of combustion directly on top of the oven 15. A thimble 24, similar in all respects to the thimble 19 above described, is fitted in an opening in the shell leading from the oven-compartment, and fitting over the outer projecting end of the thimble 24 is a short pipe-section 25, connected by means of an elbow 26 to a vertically-extending pipe-section 27, which in turn is connected to the pipe 22 above alluded to. A suitable damper 28, having an operating-handle 29, is mounted in the pipe 22 at a point between the pipe 21, leading from the combustion-chamber, and the pipe 27, leading from the oven-chamber. It will be apparent that by moving the damper so as to close the pipe 22 the products of combustion will be caused to pass from the combustion-chamber directly into the oven-chamber, where it will circulate entirely around the oven and effectually heat the same and then pass out through the pipes 25 and 27 and pipe 22 in rear of the chamber directly to the chimney, or if the oven is not desired for use the damper may be turned so as to open the pipe 22, when the products of combustion will then pass directly from the combustion-chamber through pipes 21 and 22 to the chimney without entering the oven.

By my invention I provide a combined heating and cooking stove that is extremely simple in construction and wherein the greatest possible heat-radiating surface may be obtained, this being due to the fact that no partitions or other obstructions are located in

the combustion-chamber. By arranging the pipes or flues, as described, entirely outside the stove, I provide increased heat radiating surface and also provide an arrangement whereby the products of combustion may be effectually used to heat the oven.

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

1. In a combined heating and cooking stove, a shell having a horizontal partition extending entirely across the same and dividing the shell into two compartments, one located directly above the other, an oven located in the lower compartment, flues located entirely outside the shell and communicating with said compartments, and a damper located in one of said flues and arranged to cause the products of combustion from the upper compartment to pass directly into the lower compartment or to the chimney.

2. In a combined heating and cooking stove, a shell having a horizontal partition therein extending entirely across the same and dividing the shell into two compartments one located directly above the other, an oven located in the lower compartment, said oven being smaller than said compartment whereby a space is provided entirely around the closed walls thereof, flues located entirely outside the shell and having communication with the said compartments, and a damper in one of said flues arranged to cause the products of combustion to pass from the upper compartment directly into the lower compartment or to the chimney.

3. In a combined heating and cooking stove, a shell a horizontal partition extending entirely across the same and dividing the shell into two compartments, one located directly above the other, two pipes having communication with the lower compartment, a pipe having communication with one of the said two pipes and with the upper compartment, and a damper arranged to cause the products of combustion to pass from the upper compartment directly into the lower compartment or to the chimney.

4. In a combined heating and cooking stove, a shell, a horizontal partition extending entirely across the same and dividing the shell into two compartments, one located directly above the other, an oven located in the lower compartment and elevated above the bottom thereof, two pipes having communication with the lower compartment, a pipe communicating at one end with one of the said two pipes and at its other end with the upper compartment, and a damper arranged to cause the products of combustion to pass from the upper compartment directly into the lower compartment or to the chimney.

5. In a combined heating and cooking stove, a shell, a horizontal partition extending entirely across the shell and dividing the same

into two compartments, one located directly
above the other, an oven in the lower com-
partment, a pipe extending into said com-
partment and having its inner end disposed
5 above the oven, a second pipe leading from
the bottom of the lower compartment and
communicating with the first-named pipe, a
flue leading from the upper compartment and
communicating with the said pipe that ex-
10 tends into the lower compartment, and a
damper arranged to cause the products of

combustion to pass from the upper compart-
ment directly into the lower compartment or
to the chimney.

In testimony whereof I have hereunto set 15
my hand in presence of two subscribing wit-
nesses.

JAMES WILLIAM TATUM.

Witnesses:

A. M. KIRKLAND,
S. D. SCALE.