

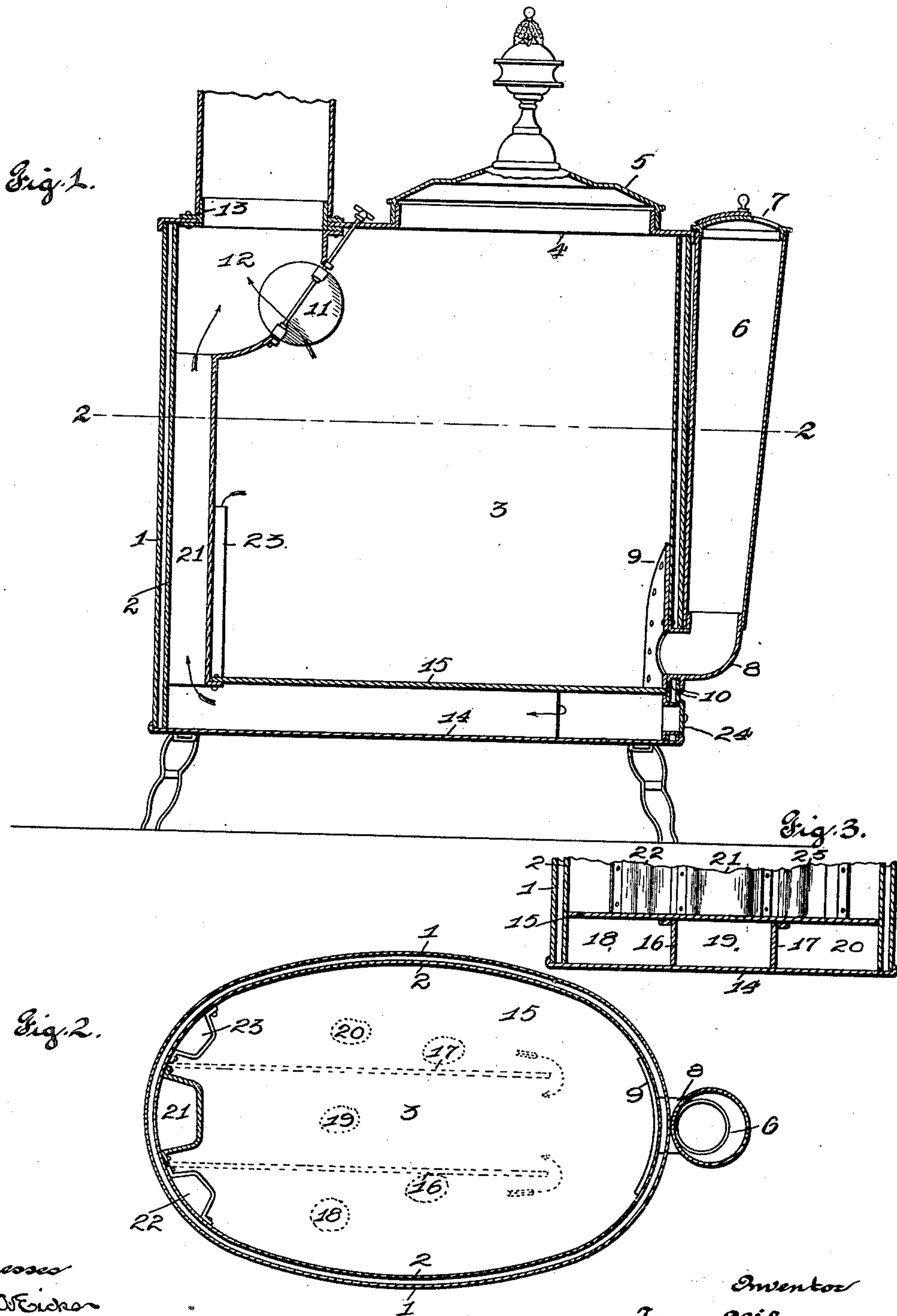
No. 722,067.

PATENTED MAR. 3, 1903.

J. WILSON.
STOVE.

APPLICATION FILED SEPT. 2, 1902.

NO MODEL.



Witnesses
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UNITED STATES PATENT OFFICE.

JAMES WILSON, OF ST. LOUIS, MISSOURI.

STOVE.

SPECIFICATION forming part of Letters Patent No. 722,067, dated March 3, 1903.

Application filed September 2, 1902. Serial No. 121,744. (No model.)

To all whom it may concern:

Be it known that I, JAMES WILSON, of the city of St. Louis, State of Missouri, have invented certain new and useful Improvements in Stoves, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention relates to heating-stoves; and it consists of the novel construction, combination, and arrangement of parts hereinafter shown, described, and claimed and which will be more readily understood by reference to the accompanying drawings, which form part of this specification, and in which—

Figure 1 is a vertical sectional view of a stove embodying my invention. Fig. 2 is a cross-section of the top of a stove embodying my invention. Fig. 3 is a detail of construction.

My object is to construct a heating-stove having an improved adjustable draft, and relates particularly to that class of stoves which is designed for burning wood; and it consists, essentially, in certain novel arrangements of parts for the withdrawal of the products of combustion from the combustion-chamber either directly or indirectly at the will of the operator in order to accelerate or retard combustion.

Referring to the drawings, the numeral 1 refers to the vertical walls of the main body of the stove and the numeral 2 to the inner wall of the same.

Fuel is fed to the combustion-chamber 3 through a feed-opening 4, formed in the top of the stove, and the said opening is normally closed by means of the covering 5. Air is admitted to the combustion-chamber through a downdraft-tube 6, which is provided at its upper end with the damper 7, by which the admission of air may be controlled at the will of the operator. The tube 6 is mounted upon the elbow 8, which extends from the walls 1 and 2 and terminates upon the inner side of the wall 1 in a flange 9. The elbow 8 is provided with depending flanges 10, which are adapted to hold it in position against the outer surfaces of the walls 1 and 2, respectively.

The combustion-chamber 3 is provided with the damper 11, by means of which draft

can be secured when desired, in which event the damper 11 is left open and the products of combustion pass directly into the receiving-chamber 12, which extends vertically through the top of the stove and is surmounted by the collar 13, upon which the stovepipe is mounted. When direct draft is not desired, the damper 11 is closed.

The base-plate 14 is connected to the bottom 15 of the combustion-chamber 3 by means of the vertical partition-strips 16 and 17, forming the flues 18, 19, and 20.

The flue 19 is connected with the reception-chamber 12 by means of the vertical flue 21. The flues 18 and 20 terminate in the short vertical flues 22 and 23, respectively, which flues open directly into the combustion-chamber at a point below the level of the damper 11.

When the damper 11 is closed, the products of combustion formed in the combustion-chamber 3 pass downwardly through the vertical flues 22 and 23 into the horizontal flues 18 and 20 toward the front of the stove and inwardly through the horizontal flue 19, as indicated by the arrows in Figs. 1 and 2, and then pass upwardly through the vertical flue 21 into the reception-chamber 12 and outward through the stovepipe.

The space between the plates 14 and 15 is opened for the purpose of cleaning by means of the door 24.

In the form of stove herein described the atmospheric air is fed at the most desirable point—namely, at the bottom of the combustion-chamber—and direct draft is secured by means of the damper 11 at the most efficient point of outlet—namely, near the top of the combustion-chamber—and after combustion of the fuel has once been started the maximum heat efficiency of the fuel is secured by compelling the heated air and other products of combustion to find their exit from the combustion-chamber in the most circuitous manner possible and in so doing to come into contact with and thoroughly heat the bottom plates of the stove and the vertical air-chamber formed by the walls 1 and 2 by being withdrawn downwardly through the flues 22 and 23, around the sides of the inner wall 2, through the flues 18 and 20, and then in-

wardly and horizontally through the flue 19 and vertically through the flue 21 and reception-chamber 12 to the point of exit.

Having thus described my said invention, 5 what I claim as new, and desire to have secured to me by the grant of Letters Patent, is—

A heating-stove comprising a suitable casing having double vertical outer walls, a 10 downdraft-tube exteriorly mounted upon an elbow extending through the side walls at or near the bottom of the combustion-chamber, the said elbow being provided with inner and outer flanges whereby it is fitted to the casing at its points of attachment, a combustion-chamber provided with a plurality of 15 vertical draft-tubes, flues between the base-plate of the stove-casing and the bottom of the combustion-chamber formed by vertical partitions and communicating with the vertical draft-tubes; a flue between the said partitions, a reception-chamber interposed be-

tween the combustion-chamber and the chimney-opening and provided with a damper whereby direct communication between the combustion-chamber and the reception-chamber may be effected, a vertical draft-tube 25 connecting the last-named flue with the reception-chamber whereby an outlet is provided for the products of combustion which are forced downwardly through the vertical draft-tubes into the base-flues when direct draft is not effected by means of the damper; the lower part of the stove-casing being provided with a door for the purpose of securing access to the lower draft-tubes, substantially 30 as and for the purposes specified.

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

JAMES WILSON.

Witnesses:

M. G. IRION,
ALFRED A. EICKS.