

No. 751,962.

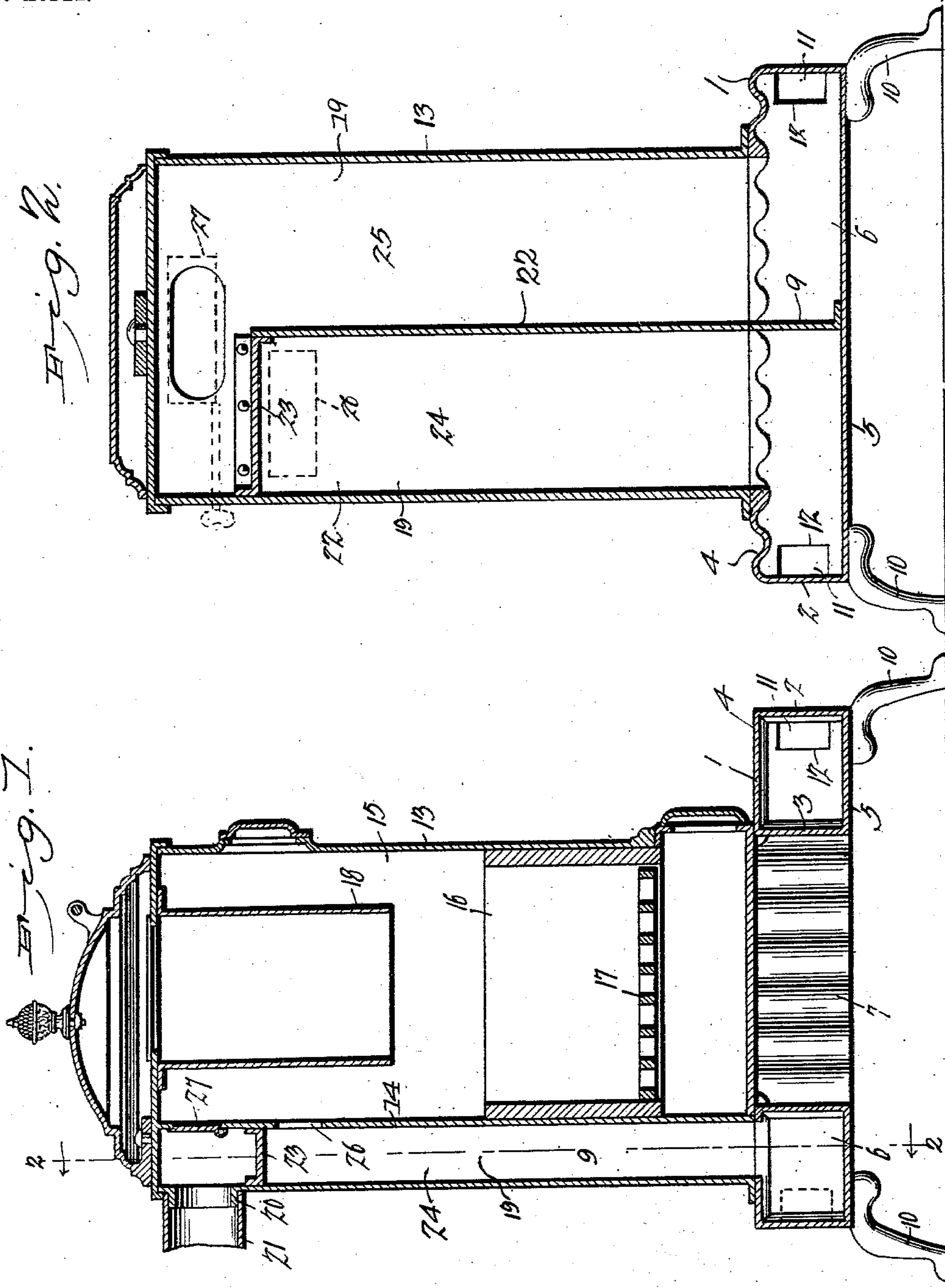
PATENTED FEB. 9, 1904.

W. S. VAN DEUSEN.  
HEATING STOVE.

APPLICATION FILED SEPT. 12, 1902.

NO MODEL.

2 SHEETS—SHEET 1.



Witnesses  
*E. J. Hawes*  
*Wm. Bagger*

W. S. Van Deusen, Inventor.  
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Attorneys

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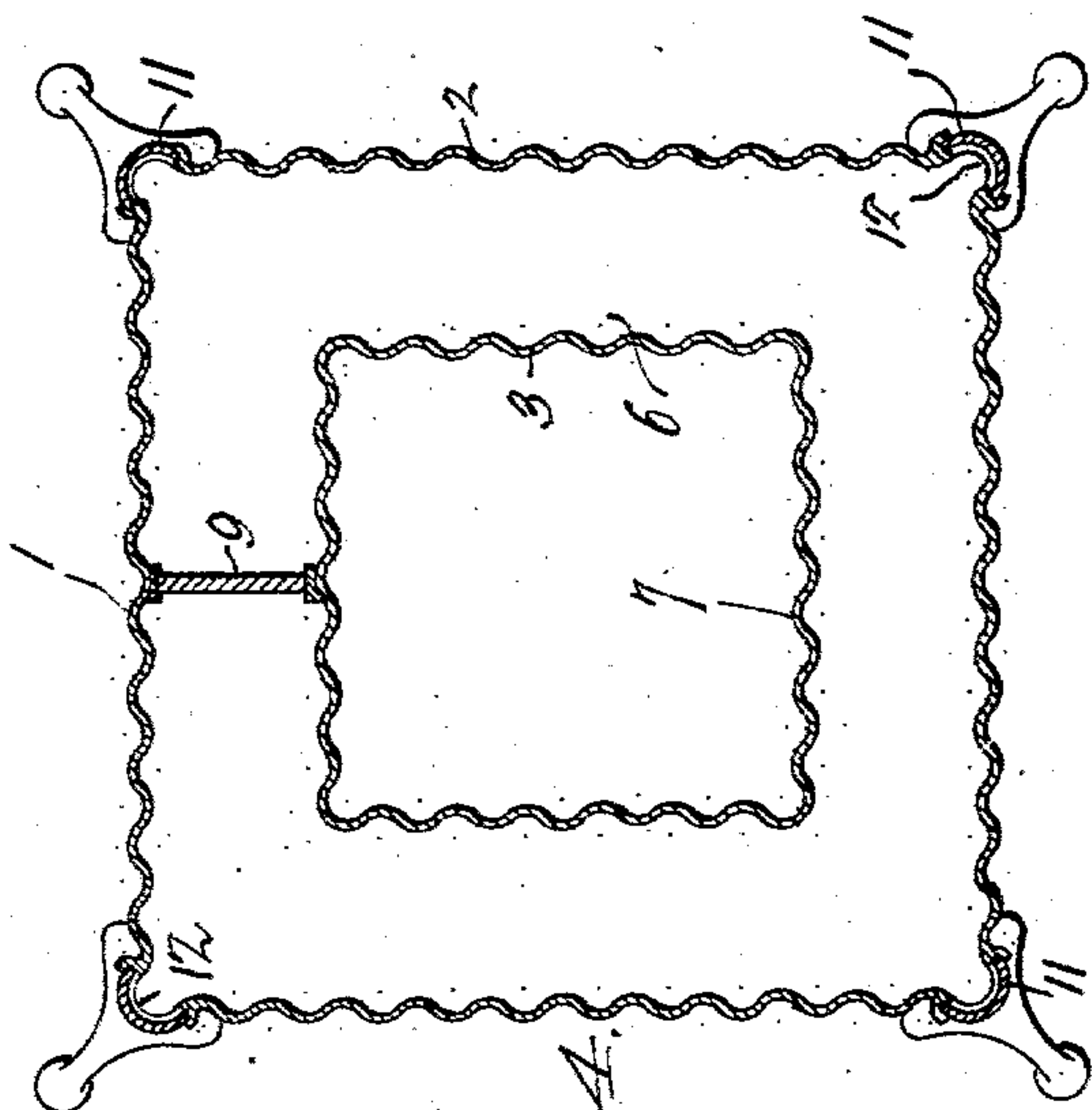
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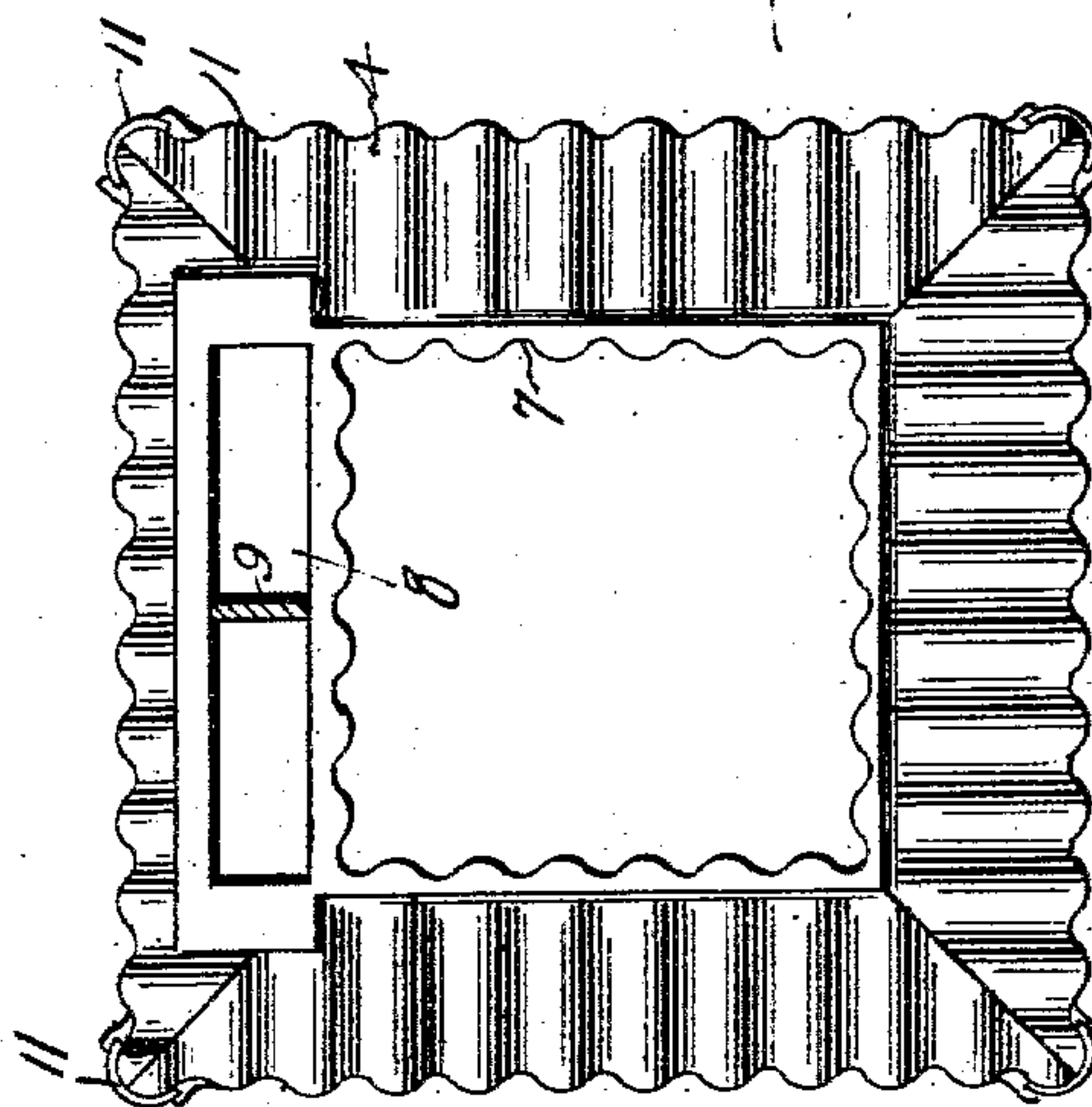
APPLICATION FILED SEPT. 12, 1902.

NO MODEL.

2 SHEETS—SHEET 2.



Witnesses  
*E. H. Hewitt*  
*Wm. Bagger*  
*Fig. 4.*



*Fig. 3.*

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# UNITED STATES PATENT OFFICE.

WILLIAM SPENCER VAN DEUSEN, OF SOUTH SODUS, NEW YORK.

## HEATING-STOVE.

SPECIFICATION forming part of Letters Patent No. 751,962, dated February 9, 1904.

Application filed September 12, 1902. Serial No. 123,177. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM SPENCER VAN DEUSEN, a citizen of the United States, residing at South Sodus, in the county of Wayne and State of New York, have invented a new and useful Heating-Stove, of which the following is a specification.

This invention relates to heating-stoves; and it has for its object to provide a device of this class in which the products of combustion shall be caused to circulate around the base of the stove in such a manner that the greatest possible amount of heat shall be derived from radiation.

With this end in view my invention consists more especially in what may be designated an improved "base" or "support" for the stove, the said base being provided with circulating-flues and with legs whereby it may be supported in the proper position upon the floor, and the said base may when preferred be supported upon the legs whereby the body of the stove is supported. This base is connected with the fire-box of the stove by means of an inlet-flue, and it has an exit-flue leading to the chimney. A damper is also provided whereby the products of combustion may be caused to pass when desired direct from the fire-chamber to the chimney.

Specifically my invention consists in the improved construction, arrangement, and combination of parts, which will be hereinafter fully described, and particularly pointed out in the claim.

My invention is capable of being applied to and used in connection with all kinds of stoves. For purposes of illustration, however, the invention has in the accompanying drawings been shown in two forms applied to heating-stoves of the simplest construction. It will, however, be distinctly understood that the parts or character of the stove may be varied indefinitely, inasmuch as, as stated, the invention by slight modifications and adaptations may be used in connection with any form of heating-stove.

In the accompanying drawings, Figure 1 is a vertical sectional view of a simple form of coal-burning stove having my invention applied thereto. Fig. 2 is a vertical sectional

view taken on the line 2 2 of Fig. 1. Fig. 3 is a plan view of the base used in connection with the form of stove illustrated in Figs. 1 and 2. Fig. 4 is a sectional view taken horizontally through said base.

Corresponding parts in the several figures are designated by similar characters of reference.

1 designates the base, which constitutes the preferred form of my invention. This base consists of an annular chamber, which in outline may be square, rectangular, round, elliptical, or of any other design and which likewise is also to be made of the requisite size to fit the stove in connection with which it is to be used. In the drawings, Figs. 1, 2, 3, and 4, this base has been shown as being square in outline and with fluted or corrugated outer, inner, and upper walls, said base being composed of the outer and inner walls 2 3, top piece 4, and bottom piece 5. Regarding the construction of the base I do not desire to limit myself. It may be cast in one or more pieces to be afterward suitably joined together, or it may be constructed in any other manner that may be deemed suitable and convenient. It will be observed that by this construction an annular flue 6 is formed within and between the walls of said base and that the latter has a central or approximately centrally disposed opening 7. The upper wall or top plate 4 of the base is provided adjacent to the central opening 7 with a slot 8, and in the portion of the flue directly below said slot is disposed a vertical partition 9, whereby said slot is centrally divided. The base is provided at its corners with legs or supports 10, and it is further provided also at its corners with vertically-sliding doors 11, covering openings 12, through which soot and ashes accumulating in the flue may be removed from time to time. The form of stove used in connection with this form of base has been illustrated in Figs. 1 and 2 of the drawings. It has been shown as consisting of a casing 13, having a transverse partition 14, whereby it is divided into a combustion-chamber 15, containing the fire-pot 16, grate 17, and magazine 18, and a flue-chamber 19, which is provided at its upper end with a collar 20 or suit-



able means for connecting it with the stove-pipe 21, leading to the chimney. The area of the stove should slightly exceed that of the central opening 7 of the base, which latter  
 5 forms the support of the stove. That part of the latter, however, which constitutes the flue-chamber should be extended sufficiently over the rear part of the base to dispose the said flue-chamber directly above the slot 8. The  
 10 flue-chamber 19, which is open at the bottom, is provided with a transverse vertical partition 22, which does not extend entirely to the top, but is connected at its upper end by a cap-plate 23 with one of the side walls of said  
 15 flue-chamber formed by the casing of the stove. The flue-chamber is thus divided into two separate compartments 24 and 25, the former of which is confined by the cap-plate 23 at its upper end. Below said cap-plate an open-  
 20 ing 26 connects said flue-compartment with the combustion-chamber 15. The open ends of the compartments of the flue-chamber being placed in alinement with the slot 8 of the base, the lower edge of the partition 22 will  
 25 aline with the transverse partition 9 in the flue 6 of the base. The transverse partition 14 of the stove is provided with a damper 27, which is located above the cap-plate 23 and practically in alinement with the exit-open-  
 30 ing surrounded by the collar 20. This, it will be seen, is an extremely simple form of a coal-burning stove. When the damper 27 is opened, the draft is direct from the fire-pot or combustion-chamber to the chimney.  
 35 When said damper is closed, the products of combustion are forced to seek an exit through the opening 26, thence downwardly through the flue-compartment 24, thence making the circuit of the base-flue 6, and finally up through  
 40 the compartment 25 and to the chimney.

It is obvious that when the interior construction of the stove is different from that herein described slight modifications may be  
 45 vice versa; but the principle of my invention

will under all conditions remain the same. Thus I have in Fig. 5 of the drawings illustrated a stove of a different pattern. In this instance only the casing and not the interior  
 50 construction has been shown. It will be sufficient to state that in this stove when not equipped with my invention the draft may be direct and merely controlled by a damper, there being no interiorly-arranged flues.

Having thus described the invention, I claim  
 55 and desire to secure by Letters Patent of the United States—

In a stove, an annular flue-chamber having an opening in the upper side thereof, and provided with a transverse partition disposed be-  
 60 low said opening, about centrally between the ends thereof, supports whereby said flue-chamber is elevated above the floor, and a stove-body having a transverse partition lo-  
 65 cated in rear of the fire-pot and dividing said stove-body into a fire-space and a flue-space, the latter being open at its lower end, while the former is closed by the bottom of the ash-pit, a vertical partition in the flue-space ex-  
 70 tending from the lower end nearly to the upper end thereof, a valved opening in the transverse partition above the flue-space partition, a closure connecting the upper end of the  
 75 latter with one of the side walls of the flue-space, and an opening in the transverse partition below said closure, said stove-body being mounted upon the annular flue-chamber with  
 80 the lower end of the flue-space partition alining and in contact with the transverse partition in the flue-chamber, and the lower ends of the flue-spaces communicating with the annular flue-chamber on opposite sides of the partition therein.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in  
 85 the presence of two witnesses.

WILLIAM SPENCER VAN DEUSEN.

Witnesses:

C. W. GAYLORD,  
 JENNIE WHALING.