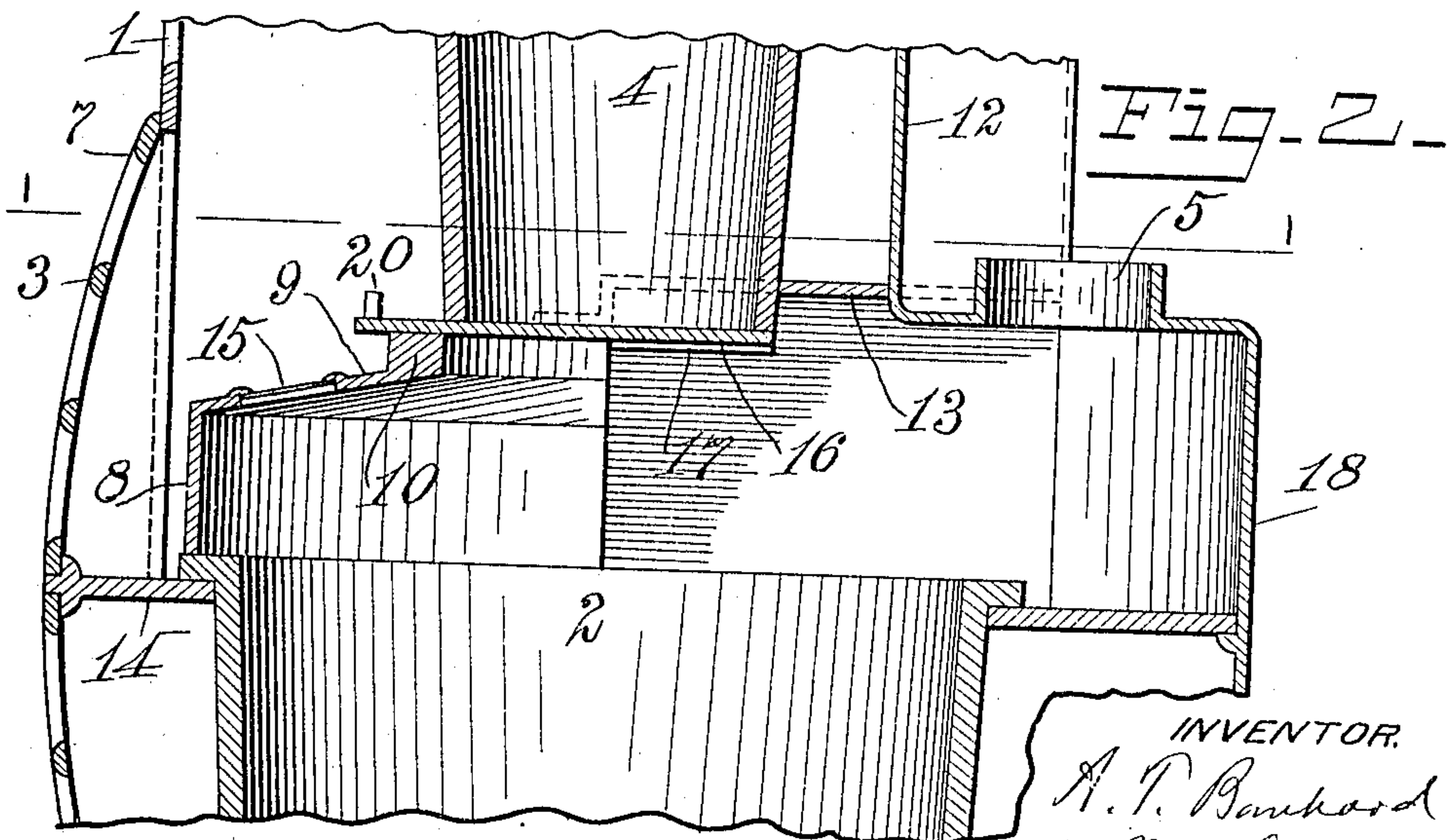
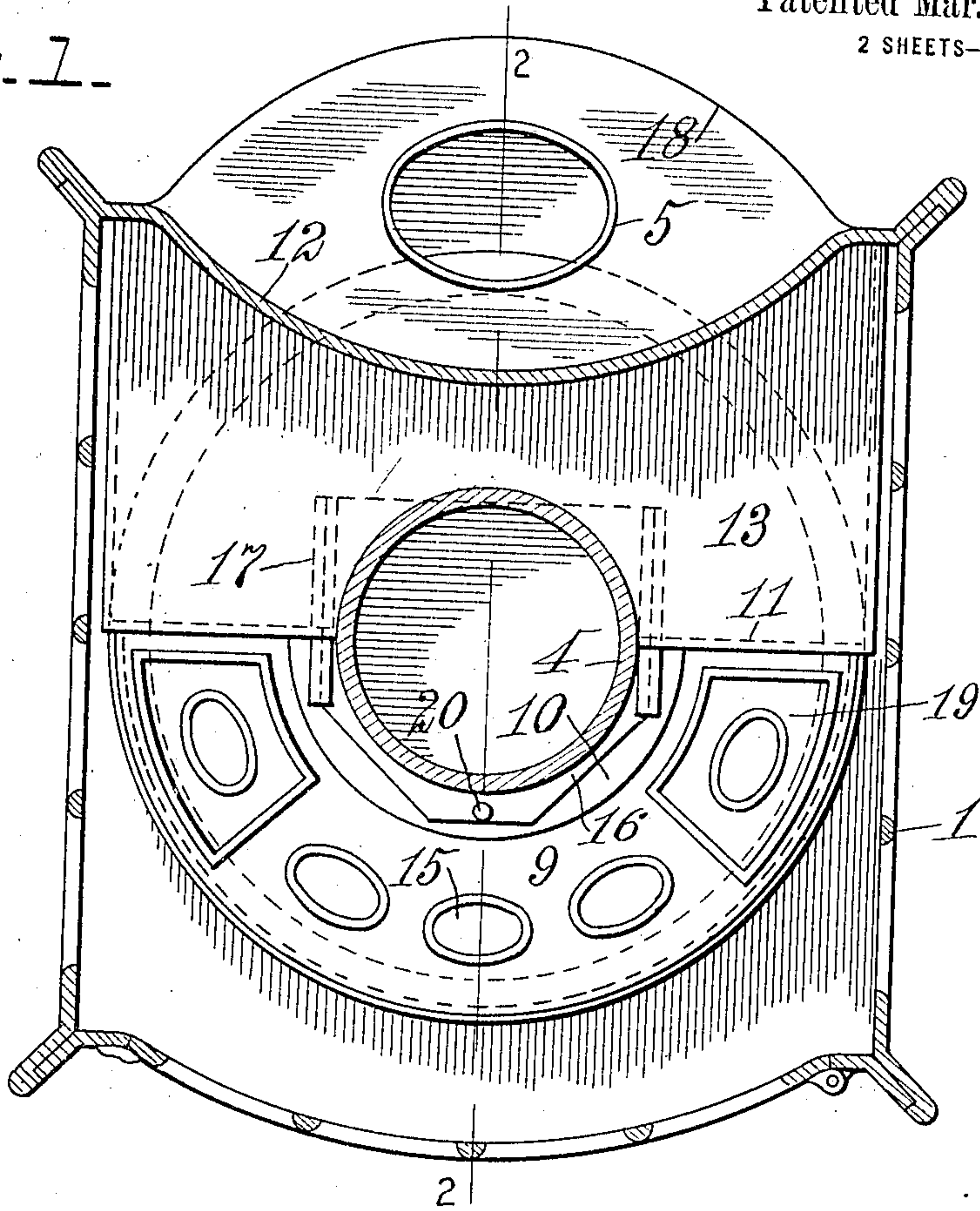


A. T. BOMHARD.
SMOKE HOOD FOR STOVES.
APPLICATION FILED DEC. 23, 1918.

Patented Mar. 25, 1919.
2 SHEETS—SHEET 1.

1,298,164.

Fig. 1.



INVENTOR.
A. T. Bomhard
By J. M. Cooney
his ATTORNEY.

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Fig. 3.

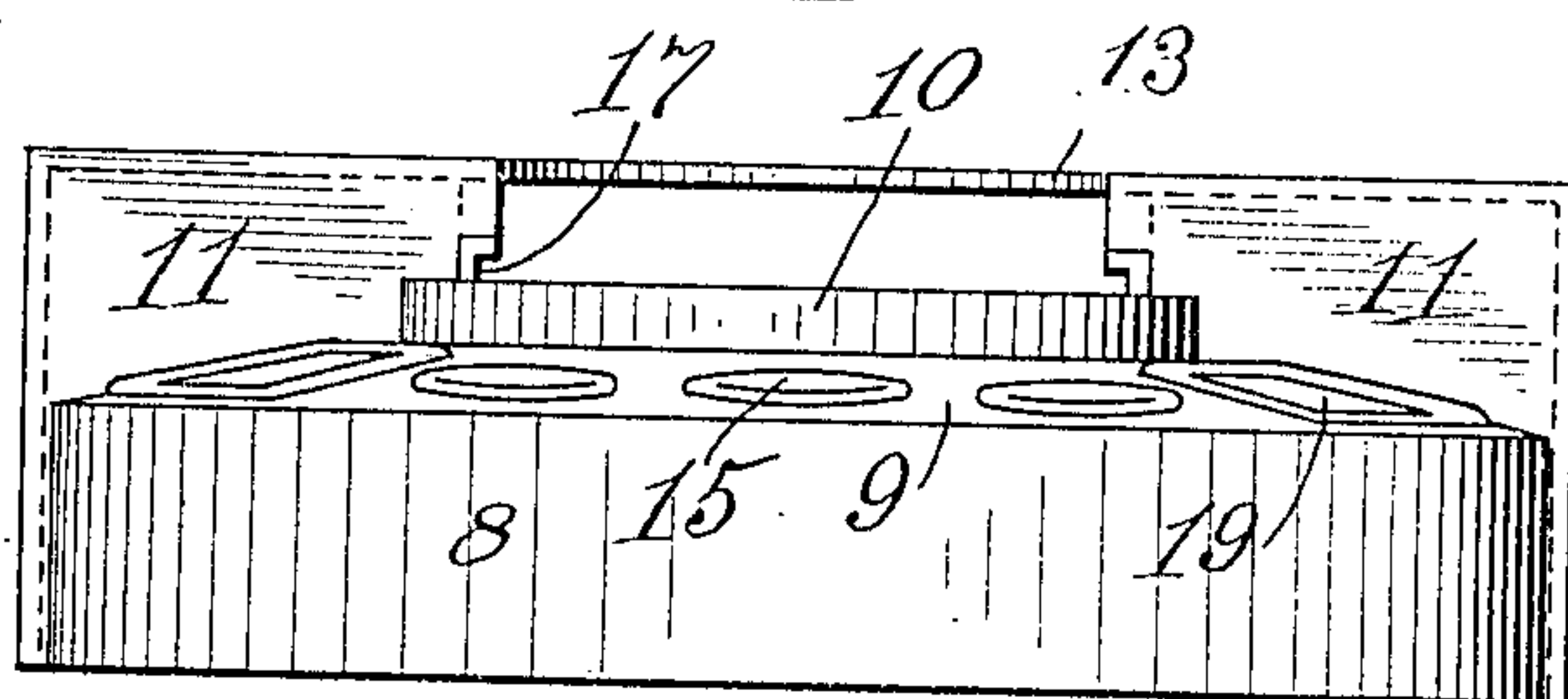
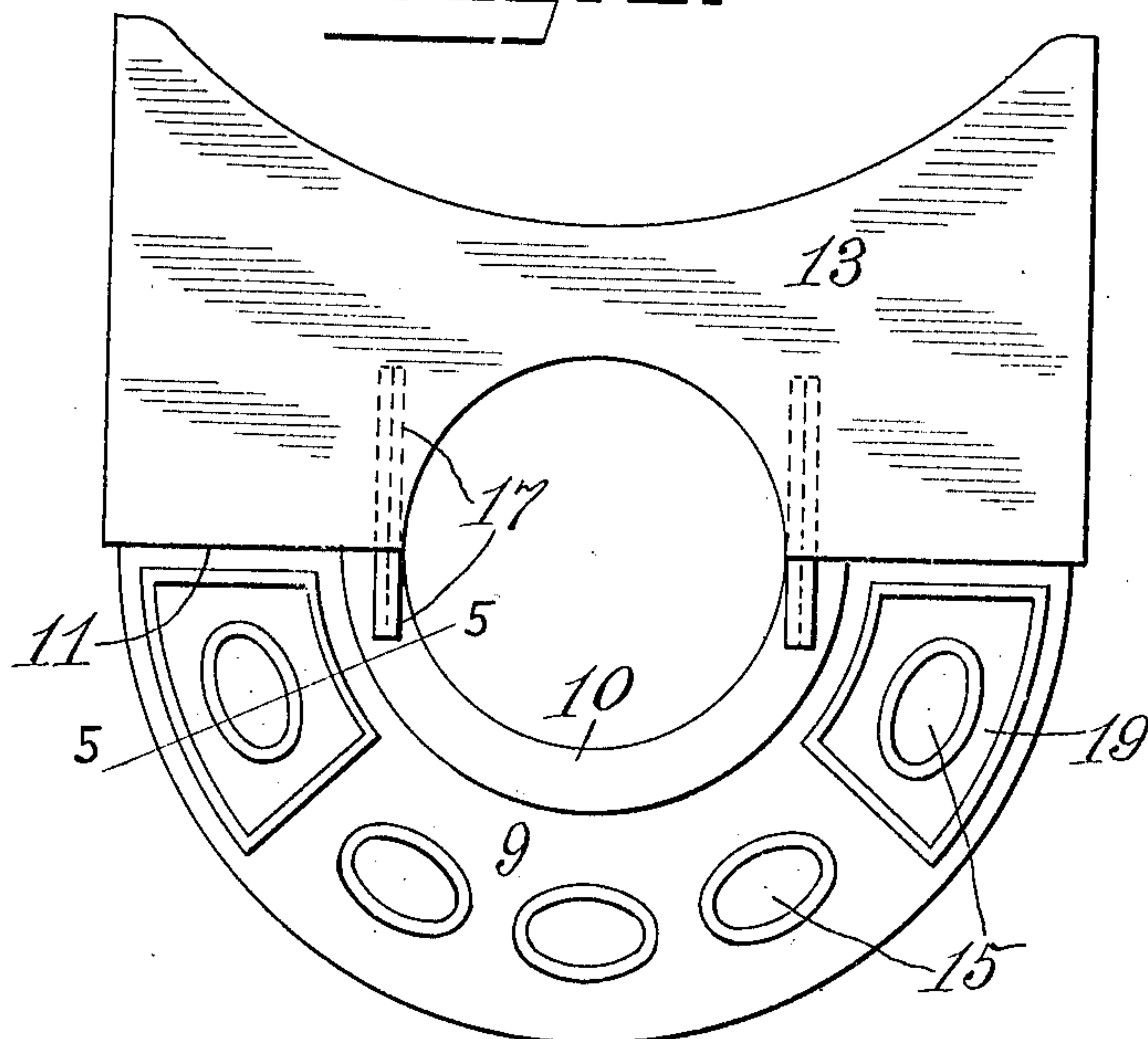


Fig. 4.

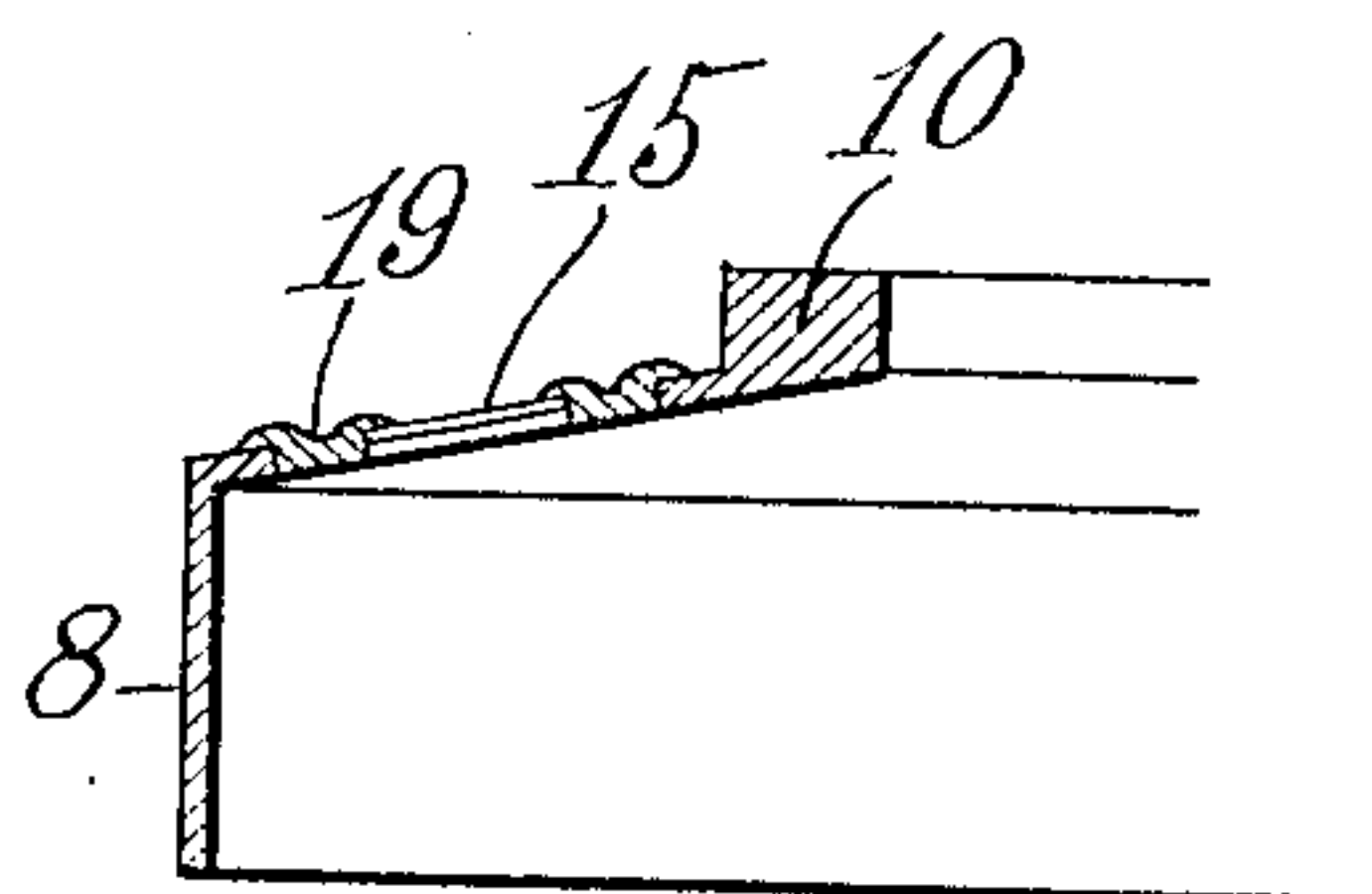


Fig. 5.

INVENTOR.
A. T. Bomhard
By *R. J. M. Carty*.
ATTORNEY.

UNITED STATES PATENT OFFICE.

ALBERT T. BOMHARD, OF PIQUA, OHIO.

SMOKE-HOOD FOR STOVES.

1,298,164.

Specification of Letters Patent.

Patented Mar. 25, 1919.

Application filed December 23, 1918. Serial No. 267,941.

To all whom it may concern:

Be it known that I, ALBERT T. BOMHARD, a citizen of the United States, residing at Piqua, in the county of Miami and State of Ohio, have invented certain new and useful Improvements in Smoke-Hoods for Stoves, of which the following is a specification.

This invention comprises a smoke hood to be placed on the inside of heating stoves to adapt the same to the use of the soft grades of coal where such stoves were intended for hard coal alone. The invention is applicable to that class of domestic heating stoves which are especially intended for the use of hard coal, such stoves being generally known as base burners.

The object of the invention is to provide means whereby soft coal may be used with no annoyance from smoke. Heretofore the permeation of smoke through the premises when soft coal and the less expensive grades of coal are used in stoves of this character, made the use of such coals prohibitive and compelled the use of hard coal entirely with its attendant expense. The present invention prevents the escape of smoke from the stove and enables the free use of soft coal and the cheaper grades of coal. The accompanying drawings are now referred to in general terms in advance of a more particular description of the invention. Of these drawings Figure 1 is a cross section through a type of domestic heating stove known as base burner, on the line 1—1 of Fig. 2. Fig. 2 is a vertical sectional view on the line 2—2 of Fig. 1, the upper and lower portions of the stove being omitted. Fig. 3 is a top plan view of the smoke controlling hood removed from the stove. Fig. 4 is a front view of the hood removed from the stove, and Fig. 5 is a sectional view of the hood on the line 5—5 of Fig. 3.

Referring to the drawings more in detail and applying similar reference characters to indicate similar parts illustrated therein, 1 designates the body of an upright stove of the base burner type. The present invention is confined in such type of stove between the magazine 4 and the fire bowl 2 of the stove. Surrounding the middle of the stove is the usual skirted or bulged portion 3 having the transparent windows 7. The horizontal wall 14 of the stove shuts off the ash pit of the stove from above and supports the fire box. The back of the stove

extends upwardly in an inwardly curved wall 12 and an outer wall 18 the latter providing an outlet space for the smoke to pass out through the flue opening 5. The fire bowl 2 is supported on the wall 14 and upon this fire bowl and between it and the magazine 4 the smoke controlling hood is placed. The front portion of this hood conforms to the contour of the fire bowl and said hood consists of a front annular skirt 8 which rests upon the front half of the fire bowl, and an upwardly tapered top portion 9 which terminates at top in a half circle which extends around the front half of the lower end of the magazine 4. From this half circle 10 the hood extends upwardly in walls 11 on each side and thence rearwardly in a wall 13 in the form of a plate which abuts against the inner side of the back 12 of the stove. The walls 11 extend out beyond the circumference of the front portion 8 of the hood to close the space between the hood and the interior sides of the stove. The tapered top portion 9 of the hood is provided with a series of openings 15 in which is placed transparent material which enables the fire to be seen from the outside of the stove, these openings being in the front where they may be viewed through the usual transparent spaces 7 in the stove proper. Some of these sight openings 15 in the hood may be provided with removable plates 19. In the drawings I show two of such removable plates 19 which are adapted to be removed from the top of the hood whenever it becomes necessary to get to the fire with a poker. These plates 19 set in suitable openings in the top of the hood and may be removed when it becomes necessary to agitate the fire by means of a poker. Immediately below the magazine 4 a slide 16 is placed to close the bottom of the magazine when the same is being filled with coal. This slide 16 is supported in guides 17 in the hood on each side of the magazine. On the front end of the slide 16 a finger piece 20 is placed to enable the sliding manipulation of said slide. As shown in Figs. 1 and 2 the slide 16 is moved in to close the bottom of the magazine. When the magazine is filled the slide is removed from this position to permit the feeding of the fire. The upper wall 13 of the hood surrounds the rear half of the magazine while the front portion of said hood surrounds the front half of the magazine

and thus the entire space above the fire bowl is closed with the exception of the space which leads from the fire bowl to the outlet flue 5. The result is that the smoke is wholly shut off from the upper portion of the stove while having its outlet to and through the flue 5 unimpeded. The upper rearward wall 13 of the hood by engaging the back 12 of the stove prevents the hood from shifting backwardly out of position while the side walls 11 prevent any side-wise shifting and thus the entire hood is held firmly in position.

Having described my invention, I claim:

1. In a stove of the class specified, the combination with the fire bowl and the magazine thereof, of a smoke hood interposed between the fire bowl and the magazine, the forward portion of said hood consisting of an annular skirt, vertical walls and a rearwardly extending wall engaging the back of the stove, and a slide supported on said hood and adapted to open and close the outlet from the magazine, substantially as specified.

2. In a stove of the class specified, the combination with the fire bowl and the magazine thereof, of a smoke hood interposed between the fire bowl and the magazine, the front portion of said hood conforming to the contour of the fire bowl and consisting of an annular skirt portion terminating in an upper contracted opening which lies beneath the magazine, and vertical side walls which extend from said contracted opening, and a rearward horizontal wall which extends from said vertical walls and abuts with the back wall of the stove,

said vertical and horizontal walls serving to close the upper space of the stove from the fire box and the smoke outlet passage.

3. In a stove of the class specified, the combination with the fire bowl and the magazine thereof, of a smoke hood interposed between said fire bowl and said magazine, the front portion of said hood having a skirt portion engaging the top of the fire bowl, the rearward part of said hood terminating in a raised wall which engages the back of the stove, the top of the front of said hood having a series of windows therein through which the fire in the fire bowl may be seen, and a slide supported in guides on said hood and adapted to open and close the outlet from the magazine.

4. In a stove of the character specified, the combination with the fire bowl and the magazine thereof, of a smoke hood supported on the fire bowl, the front half of said smoke hood consisting of a semi-circular portion terminating in an inwardly lying half circular marginal portion which surrounds the front half of the discharge end of the magazine, vertical walls extending from said marginal portion on each side of the magazine and closing the side spaces within the stove, and a horizontal wall extending back from said vertical walls and abutting against the back wall of the stove and closing the rearward space within the stove above the outlet flue, and a slide supported on said hood and adapted to open and close the outlet of the magazine, substantially as specified.

In testimony whereof I affix my signature.
ALBERT T. BOMHARD.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."