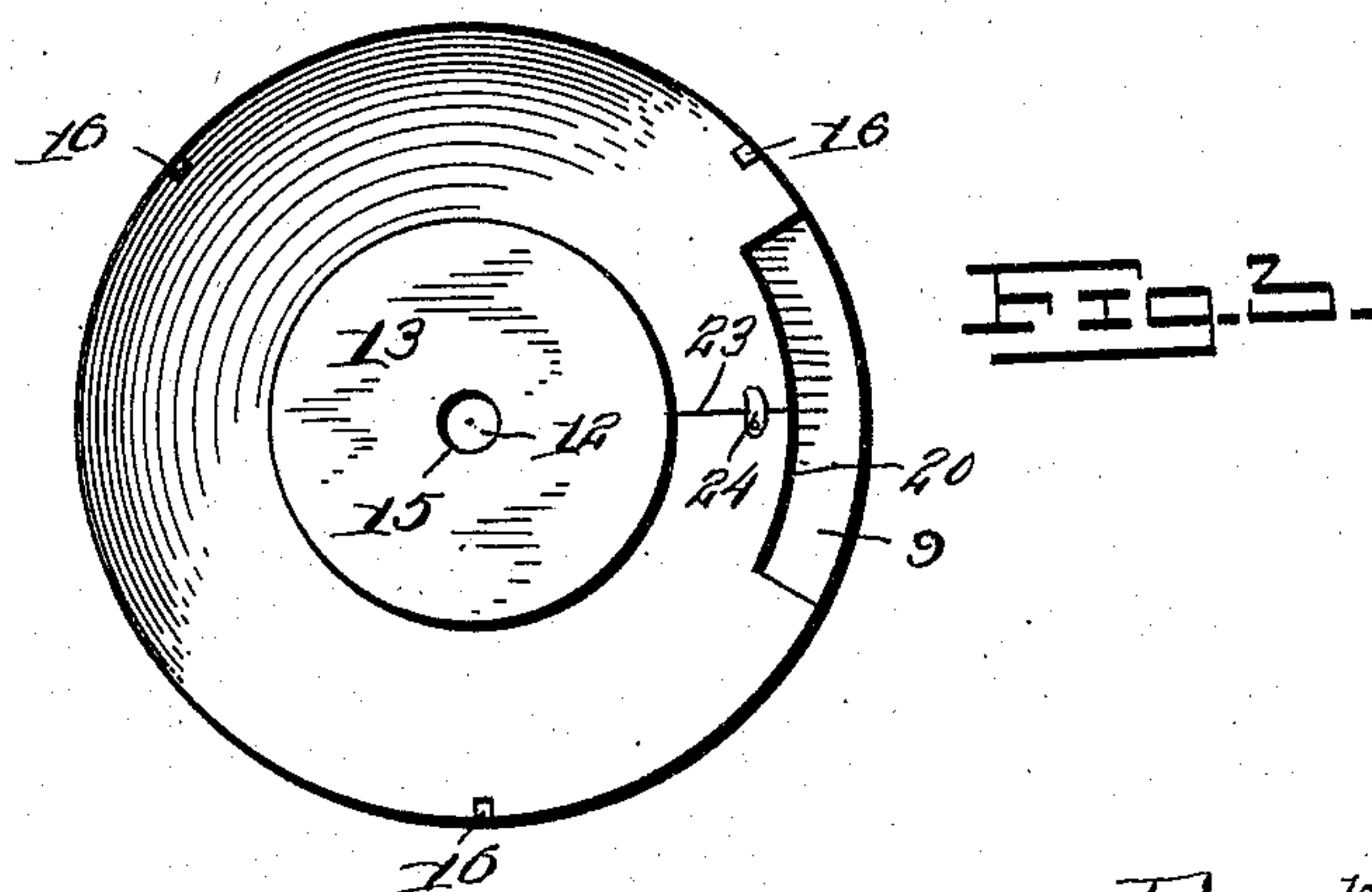
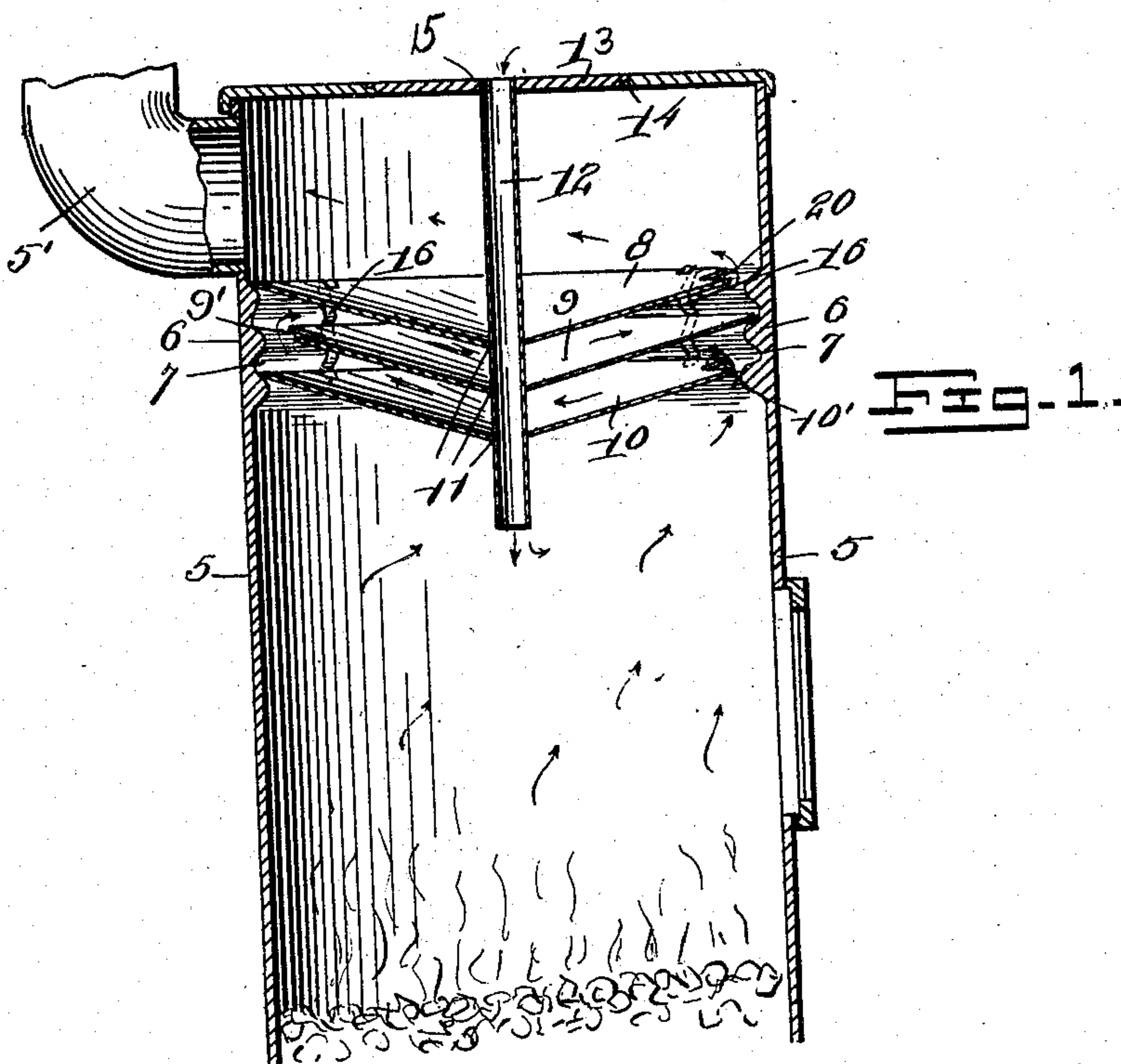


No. 806,614.

PATENTED DEC. 5, 1905.

F. O. ALIN.
STOVE ATTACHMENT.
APPLICATION FILED APR. 8, 1905.

2 SHEETS—SHEET 1.



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2 SHEETS—SHEET 2.

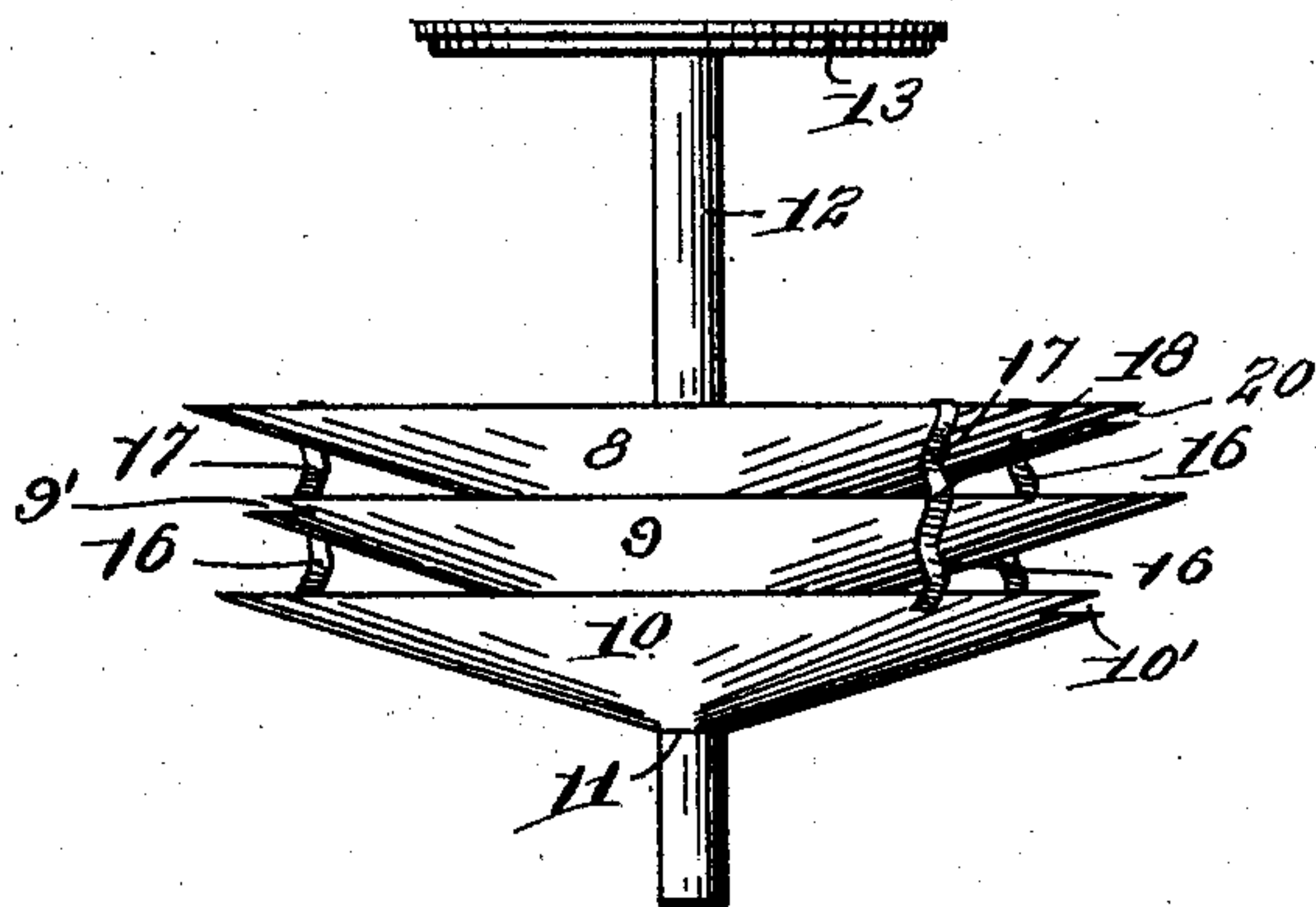


Fig. 2.

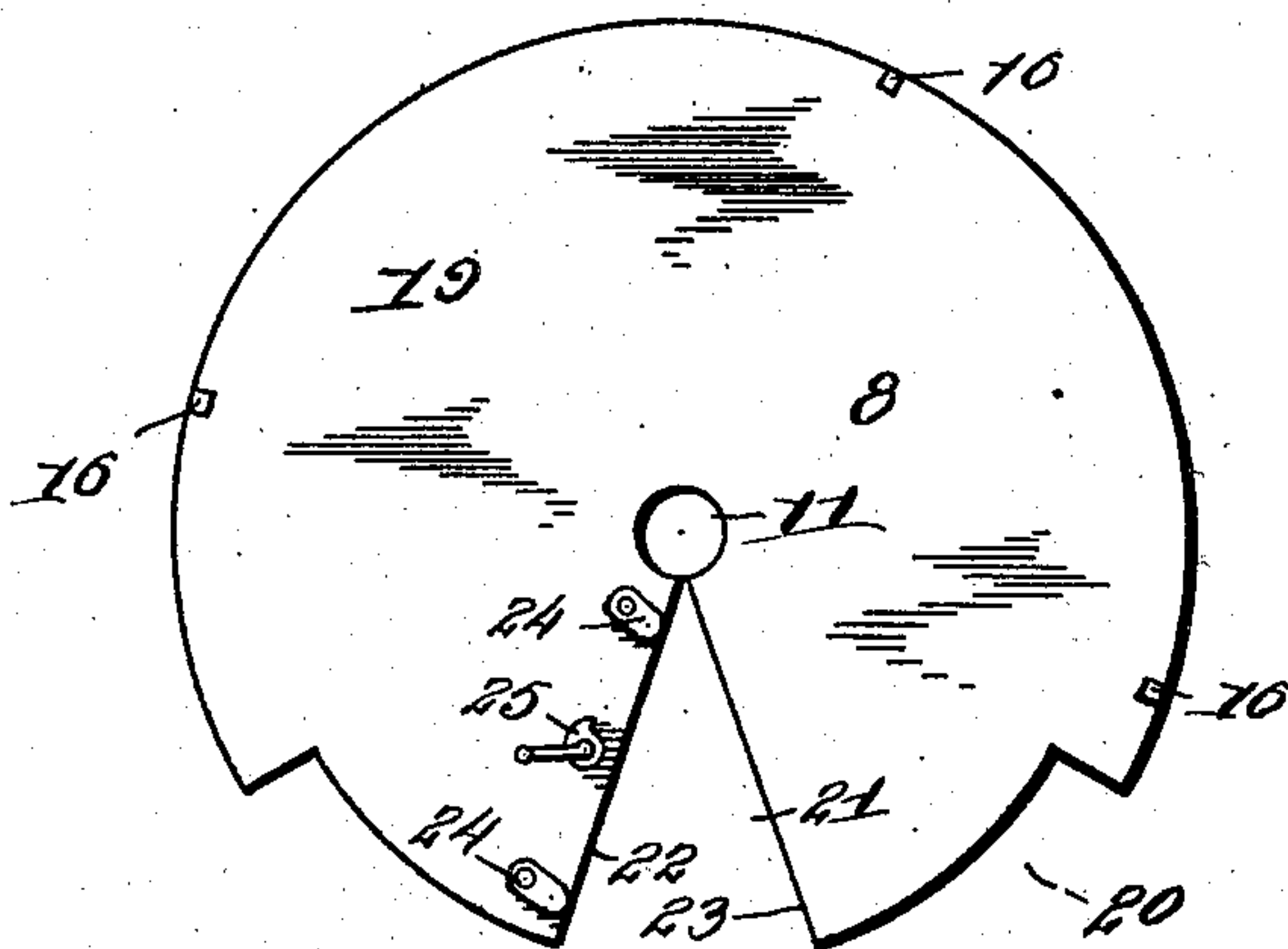


Fig. 4.

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STOVE ATTACHMENT.

No. 806,614.

Specification of Letters Patent.

Patented Dec. 5, 1905.

Application filed April 8, 1905. Serial No. 254,515.

To all whom it may concern:

Be it known that I, FRANK O. ALIN, a citizen of the United States, residing at Fullerton, in the county of Dickey, State of North Dakota, have invented certain new and useful Improvements in Stove Attachments; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to stoves, and more particularly to attachments therefor, and has for its object to provide an attachment which may be placed within a stove and which will be arranged to deflect the heat in such a way that the stove will be caused to throw off a greater amount of heat, the attachment being so arranged that it may be engaged in a number of different stoves interchangeably.

Other objects and advantages will be apparent from the following description, and it will be understood that modifications of the specific construction shown may be made and any suitable materials may be used without departing from the spirit of the invention.

In the drawings forming a portion of this specification, and in which like numerals of reference indicate similar parts in the several views, Figure 1 is a longitudinal section of a stove provided with the present invention. Fig. 2 is a side elevation of the present invention removed from the stove. Fig. 3 is a top plan view of the attachment. Fig. 4 is a view of the blank from which the uppermost deflecting member is formed.

Referring now to the drawings, there is shown a stove 5, which is circular in form and which is composed of sheet metal, the stove having the usual inwardly-extending ribs 6 stamped therein adjacent to its upper end, the stamping of these ribs resulting in grooves 7 in the inner surface of the stove.

The present attachment comprises a plurality of funnel-shaped deflecting members 8, 9, and 10, the uppermost member 8 being somewhat larger than the rest, these members being disposed one above the other in spaced relation and with their minor ends within the inclosure of the member next below. The members have openings 11 in their minor ends, and engaged in these openings there is a vertical air-tube 12, open at its upper and lower ends and extending above and below the members, as shown. The air-tube is removably engaged in the openings 11, and at its upper end it has secured thereto a stove-lid 13, which

when the attachment is in operative position within a stove lies within the opening 14, with which stoves of this type are provided in their tops. The lid 13 has an opening 15 there-through, which communicates with the interior of the tube 12 for the passage of air into the tube and thence to the stove.

As stated above, the upper deflecting member 8 is somewhat larger than the lower deflecting members, and this member 8 has secured thereto a plurality of depending metallic strips 16, which are bent to form a plurality of inwardly-directed corrugations 17 and intervening spaces 18, and the deflecting members 9 and 10 are disposed with their edge portions engaged between the corrugations 17 to hold the several members together. It will be readily understood that the metallic strips 16 may be sprung outwardly to permit of disengagement of the members therefrom.

The member 8 is formed from a circular metallic blank 19, provided with a cut-away portion 20 in its periphery, and this blank is also provided with a second cut-away portion 21 of segmental shape, which communicates with the opening 11, formed in the center of the blank, and with the cut-away portion 20, the edges of the blank at the sides of the segmental cut-away portion being indicated at 22 and 23, respectively. In forming the funnel-shaped member 8 the blank 19 is curved to cause its edge portions 22 and 23 to overlap, and the edge portion 23 is engaged beneath fingers 24, which are secured to the member adjacent to the edge 22, these fingers lying in spaced relation to the inner surface of the member, and the metal of the blank is bent to hold its edge portions yieldably in overlapping position, as described.

Pivotaly mounted upon the inner surface of the member 8 between the fingers 24 there is a cam-disk 25, which is movable to bring its cam-surface into and out of engagement with the edge portion 23 of the member, and it will be readily understood that when the cam-surface is moved into engagement with this edge portion the overlapping portion of the member will be moved with respect to each other to increase the periphery of the member.

In placing the present attachment in position the disk 25 is moved to bring its cam-surface out of engagement with the edge 23 of the member 8, and the member is then placed within the stove with its periphery in position to enter one of the grooves 7, it be-

ing understood that the members 9 and 10 have been previously engaged with the strips 16. After the attachment has been thus disposed the cam-disk 25 is moved to expand the member 8, thus causing the periphery of this member to enter the groove 7, and the attachment will thus be held in position within the stove. The air-tube 12 may then be engaged in the openings 11, as described above. The members 9 and 10 are provided with cut-away portions 9' and 10', respectively, in their peripheries, and these cut-away portions are located at opposite sides of the attachment, the cut-away portion 10' lying beneath the cut-away portion 20 of the member 8 and with the member 9 extending between these two cut-away portions. The peripheries of the members 9 and 10 lie in engagement with the inner surface of the stove, so that the heat from the fire is compelled to pass through the cut-away portion 10' to the space between the members 9 and 10, thence through the cut-away portion 9' to the space between the members 8 and 9, from which it passes to the cut-away portion 20 to the space above the member 8, traversing this space to the flue 5' of the stove, the cut-away portion being disposed at the opposite side of the stove from the flue, as shown. The heat thus follows a tortuous path from the combustion-chamber to the flue and is deflected downwardly against the wall of the stove by the members 8, 9, and 10, the stove being thus caused to radiate a greater volume of heat therefrom than when the products of combustion are permitted to pass directly to the flue.

What is claimed is—

1. A device of the class described comprising a plurality of funnel-shaped heat-deflecting members disposed one above the other, the minor ends of each of said members being disposed within the inclosure of the member next below, said members having alining central openings, an air-tube engaged in the openings, and spring-clips carried by the uppermost members and engaged with the remaining members to hold the several members against separation.

2. A device of the class described comprising a plurality of spaced heat-deflecting members disposed one above the other, the uppermost member being expansible for engagement of its edges with the inner surface of the wall of a stove, means for expanding the

member, and spring-clips carried by said member and engaged with the remaining members, said members having openings therethrough for the passage of heat.

3. A device of the class described comprising a plurality of spaced members disposed one above another, said members having openings therethrough in their side portions, the openings of the alternate members lying at opposite sides of the device, and spring-clips carried by the uppermost member, and removably engaged with the remaining members, the several members being adapted for disposal within a stove with their edges in engagement with the walls thereof.

4. The combination with a stove having a continuous groove in the inner surface of its walls, of an expansible heat-deflecting member disposed with its edge portions in the groove, and means for holding the member expanded and against disengagement from the groove.

5. A heat-deflecting member for stoves comprising a circular plate having an opening through its center and having a segmental cut-away portion communicating with its periphery, and with its central opening, said plate being bent to bring the portions at the sides of its cut-away portion into overlapping relation, and means for moving the overlapping portions with respect to each other to increase the circumference of the member.

6. A heat-deflecting member for stoves comprising a circular plate having a central opening and having a segmental cut-away portion therein communicating at its minor end with the circular opening, and at its major end with the periphery of the plate, said plate being bent to bring its end portions at the sides of the cut-away portion into overlapping relation, fingers carried by one end of the plate and extending over the other end, and a cam-disk carried by the plate adjacent to one of its ends and movable to bring its cam-surface into and out of engagement with the other end of the plate to move the overlapping portions with respect to each other.

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

FRANK O. ALIN,

Witnesses:

A. O. ANDERSON,
FRED ANDERSON.