

C. E. MATHEWS.
ATTACHMENT FOR STOVEPIPES.
APPLICATION FILED MAY 11, 1909.

940,542.

Patented Nov. 16, 1909.

Fig. 1.

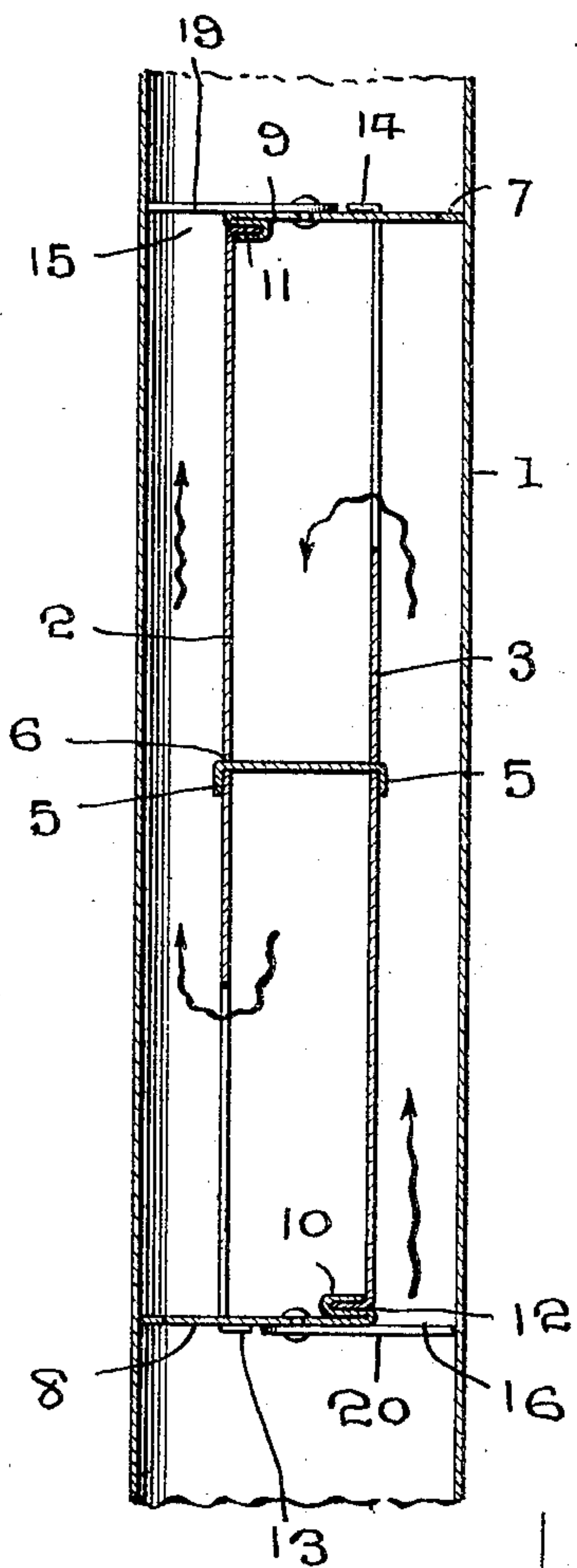


Fig. 2.

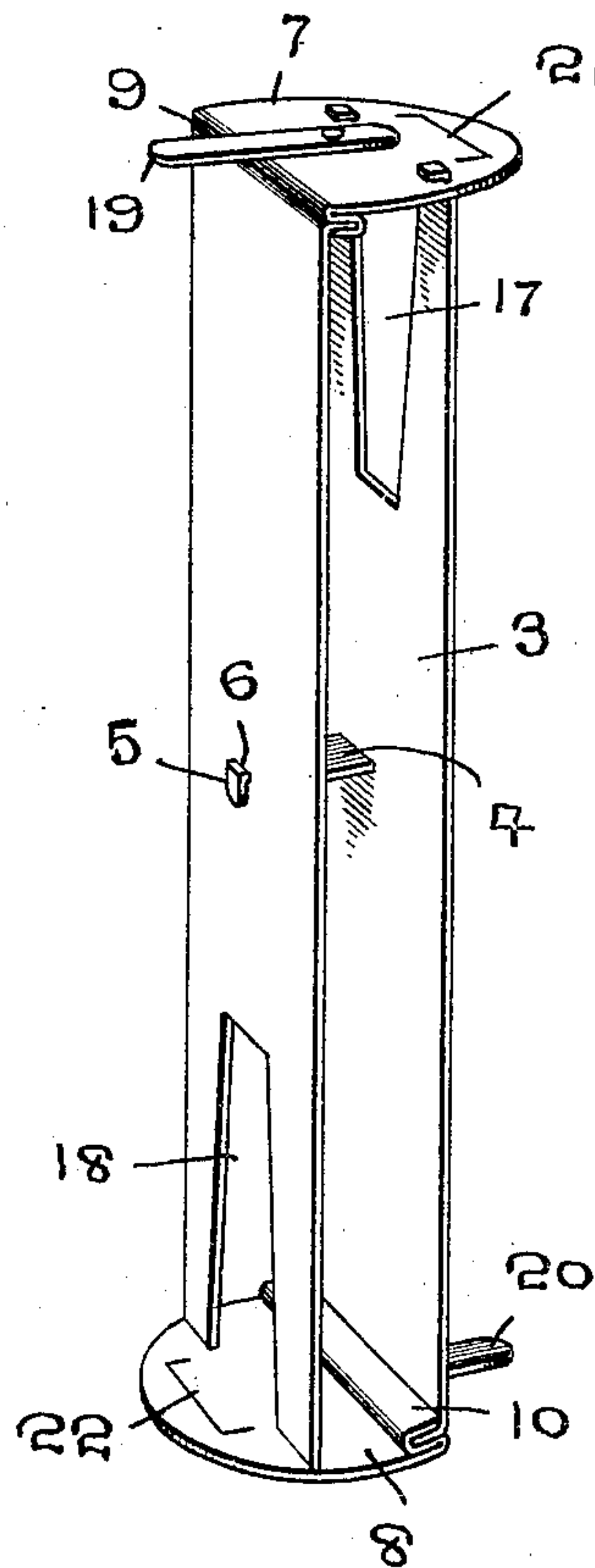
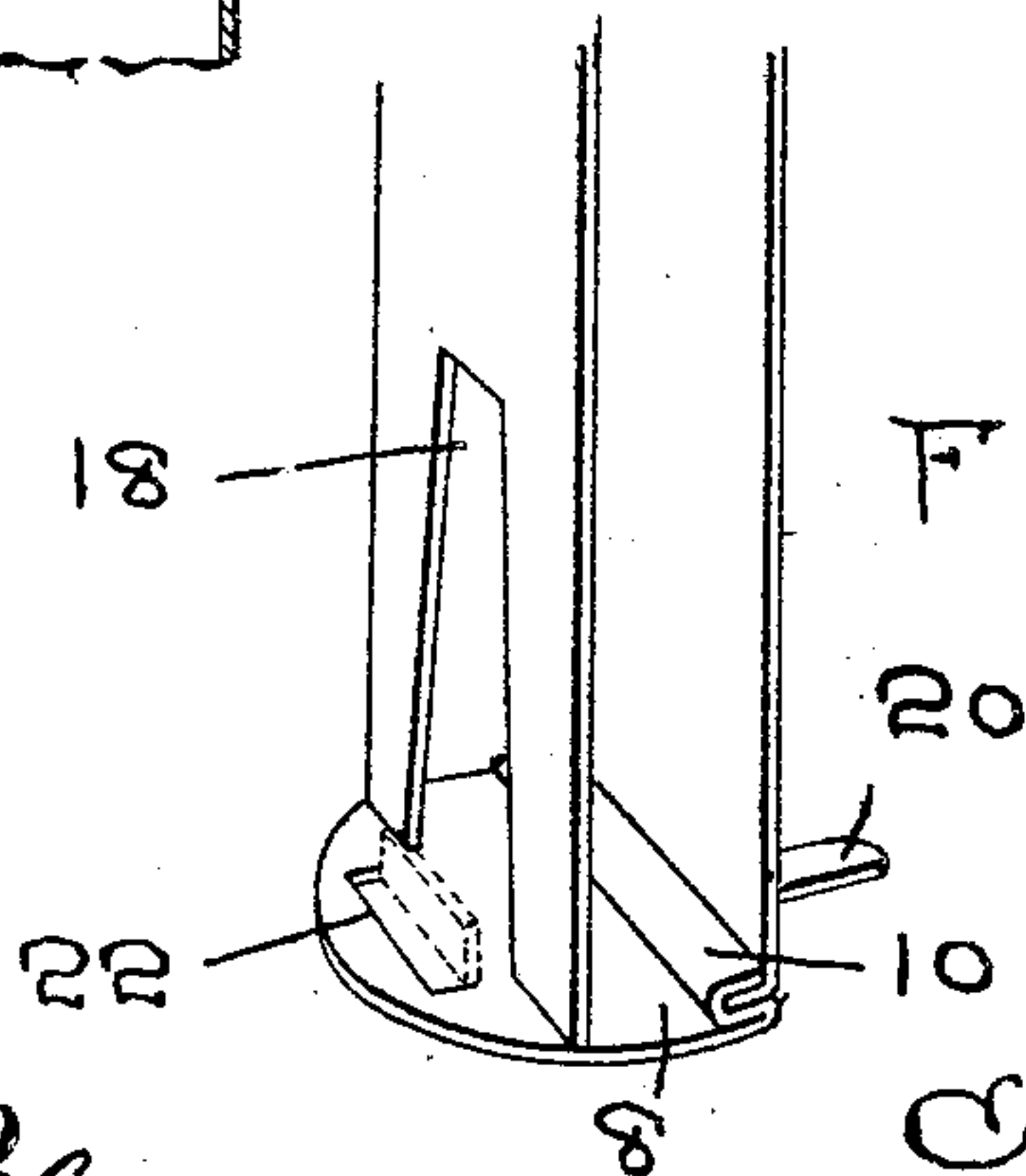


Fig. 3.



WITNESSES:

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ATTACHMENT FOR STOVEPIPES.

940,542.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, CHARLES E. MATHEWS, a citizen of the United States, residing at Doylestown, in the county of Columbia and State of Wisconsin, have invented certain new and useful Improvements in Attachments for Stovepipes; 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.

My invention relates to new and useful improvements in attachments for stove pipes and my object is to provide means for checking the passage of the products of combustion as they pass through the stove pipe.

A further object is to provide means for causing the products of combustion to travel through a circuitous passage in certain of the joints of the pipe.

A further object is to provide means for securing the attachment within the pipe and a still further object is to provide draft ports for inducing circulation of the products of combustion through the pipe.

Other objects and advantages will be hereinafter referred to and more particularly pointed out in the claims.

In the accompanying drawings forming part of this application, Figure 1 is a sectional view through the stove pipe showing my improved attachment applied to use therein, and, Fig. 2 is a perspective view of the attachment removed from the pipe. Fig. 3 is a broken detailed perspective view showing one of the tongues formed by slitting the caps at the ends of the vertical plates of the attachment upturned as in forming thereby ports in said caps.

Referring to the drawings in which similar reference numerals designate corresponding parts throughout the several views, 1 indicates a pipe, which is constructed in the usual manner and preferably of sheet metal through which the products of combustion pass from the stove to the chimney and in order to arrest the products of combustion and cause the same to circulate back and forth through one of the sections of the pipe, I provide a pair of plates 2 and 3, which extend vertically of the pipe and are reinforced and held spaced apart at their longitudinal centers by means of a space bar 4, the ends of which are provided with tongues 5, which are entered through openings 6 in the plates 2 and 3, and said tongues

then bent downwardly to hold the plates in engagement with the space bar.

At the upper and lower ends of the plates 2 and 3 are caps 7 and 8, respectively, the edges of which are curved to fit the contour of the interior of the pipe, one portion of each of the caps being bent downwardly and curved to form a channel 9 and 10, respectively, with which engage flanges 11 and 12, respectively, at the upper end of the plate 2 and lower end of the plate 3, while the opposed ends of said plates are provided with tongues 13 and 14, which extend through slots in the caps 8 and 7, respectively, and are then bent at right angles to securely lock the caps in engagement with the plates.

The employment of portions of the caps 7 and 8 to form the channels 9 and 10 leave portions of the interior of the pipe free and form passages 15 and 16, respectively, at the upper and lower end of the plates, the passage 15 being adjacent the upper end of the plate 2, while the passage 16 is at the lower end of the plate 3, thereby disposing said passages on opposite sides of the pipe and as the plates are of a width equal to the diameter of the pipe, it is necessary for the products of combustion to pass through the plates previous to leaving the passage 15. To this end, therefore, the upper end of the plate 3 is bifurcated to form a port 17, while the lower end of the plate 2 is similarly bifurcated to form a port 18, thereby providing a circuitous path for the products of combustion within the section of pipe in which the device is located, such path being shown by arrows in Fig. 1.

After the device is placed in position in the section of pipe, it is held fixed therewith by providing latches 19 and 20 which are pivotally attached at one end to the caps 7 and 8, respectively, said latches being of such length as to extend entirely across the passages 15 and 16 and into engagement with the wall of the pipe 1, thereby securely holding the device in position and without materially interrupting the passage of the products of combustion.

Should the draft in the chimney be sluggish as is frequently encountered, the choking of the pipe as described would prevent the free passage of the products of combustion from the stove and when a chimney of this class is encountered, the caps 7 and 8 are to be provided with ports which are formed by severing parts of the caps, the

tongues 21 and 22, respectively, thus formed, being bent upwardly, thereby permitting a direct passage of portions of the product of combustion through the section of pipe in which the device is located.

The products of combustion in passing through the pipe to the chimney first enter the passage 16, thence upwardly along the outer face of the plate 3 to the port 17, from whence it passes between the plates 2 and 3, and downwardly to the lower end of the plate 2 where it passes through the port 18 and upwardly through the passage 15 and as the entire products of combustion are forced to pass adjacent the surface of the pipe, a greater heating effect thereof will be obtained and in addition to this, a less amount of fuel will be consumed than where the products of combustion pass immediately to the chimney.

What I claim is:

1. The combination with a stove pipe, of spaced-apart plates, one of said plates having a port at one end and the other plate having a port at its opposite end, caps rigidly secured to both ends of said plates, one cap extending beyond one plate and the other cap extending beyond the opposite plate, said caps being adapted to engage opposite walls of said stove pipe, and retaining members applied to said caps, each retaining member extending oppositely to the projecting portion of the cap to which it is applied and also adapted to engage the wall of the stove pipe to aid the retention of the attachment thus formed centrally in the stove pipe, one of said retaining members allowing the passage of the products of combustion upwardly intermediate of one plate and the wall of the stove pipe prior to passing of said products of combustion between the plates, and the other retaining member permitting like upward passing of said products of combustion after leaving said attachment and their entering the stove pipe at a point above the latter said attachment being removable from said stove-pipe.

2. The combination with a stove pipe, of spaced-apart plates, one of said plates having a port at one end and the other plate having a port at its opposite end, said plates having an inwardly extending flange at one end and the other plate having a correspond-

ing flange at its opposite end, caps rigidly secured to both ends of said plates, one cap having a pocket at one edge for the reception of one of said flanges and the other cap having a pocket at its opposite edge for the reception of the other flange, and retaining members applied to said caps, each extending oppositely to the projecting portion of the cap to which it is applied and also adapted to engage the walls of the stove pipe to aid the retention of the attachment thus formed centrally in the stove pipe, one of said retaining members allowing the passing of the products of combustion upwardly intermediate of one plate and the walls of the stove pipe prior to the passing of said products of combustion between the plates, and the other retaining member permitting the passage of said products of combustion into the stove pipe after passing between said plates, above said attachment said attachment being removable from said stove-pipe.

3. The combination with a stove pipe, of spaced-apart plates, one of said plates having a port at one end and the other plate having a port at its opposite end, caps rigidly secured to both ends of said plates, one cap extending beyond one plate and the other cap extending beyond the opposite plate, said caps being provided with slits in their extending portions, said slits forming tongues adapted to be bent so as to form passages in said plates, and latch-bars applied to said caps, each extending oppositely to the projecting portion of the cap to which it is applied and also adapted to engage the walls of the stove pipe, one of said latch-bars allowing the passing of the products of combustion upwardly intermediate of one plate and the walls of the stove pipe prior to passing between said plates, and the other retaining member permitting the passage of said products of combustion into the stove pipe after passing between said plates, above said attachment said attachment being removable from said stove-pipe.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

CHARLES E. MATHEWS.

Witnesses:

ETHEL SMITH,
C. A. MILLER.