April 28, 1931. B. L. FLAHERTY 1,802,418

FLUE BASE AND SOOT CHAMBER

Filed May 3, 1930

Fig. 1.

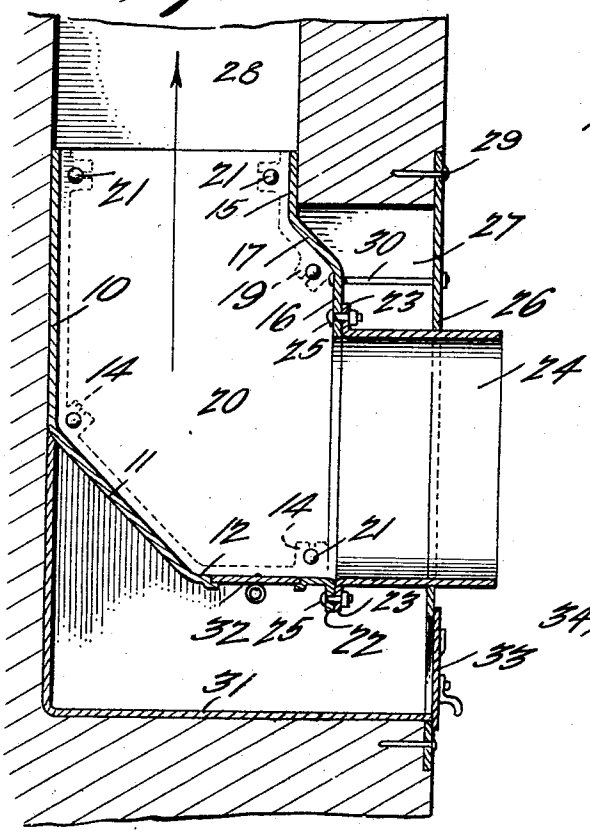


Fig. 3.

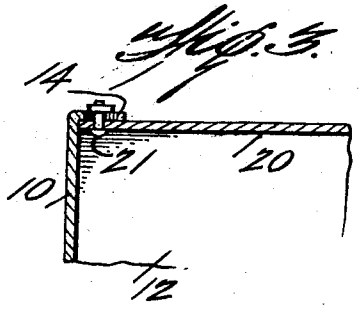


Fig. 4.

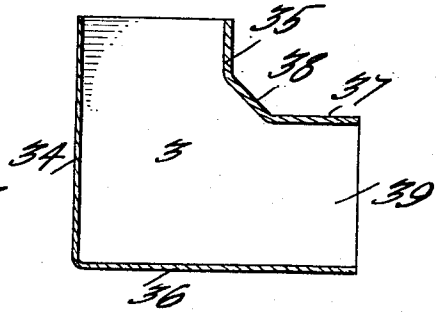


Fig. 5.

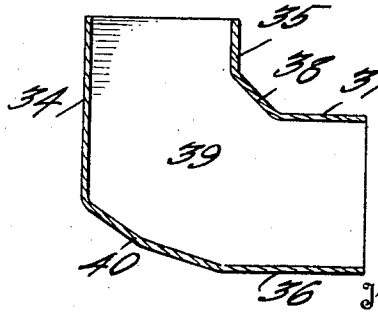
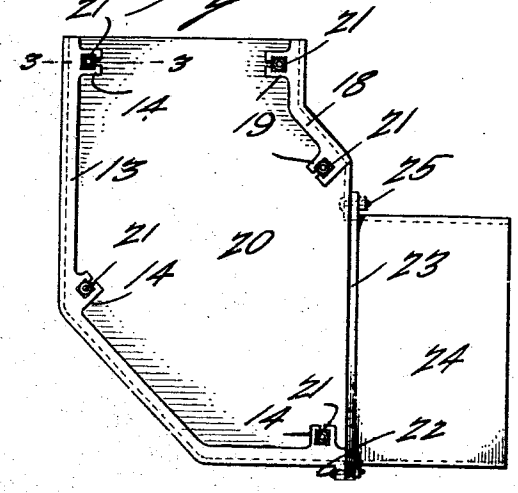


Fig. 2.



Inventor

B. L. FLAHERTY

By

Attorney

Patented Apr. 28, 1931 1,802,418

UNITED STATES PATENT OFFICE

BURT L. FLAHERTY, OF DAYTON, OHIO, ASSIGNOR, BY DIRECT AND MESNE ASSIGNMENTS, TO CENTRAL HEATING EQUIPMENT CORPORATION, OF DAYTON, OHIO, A CORPORATION OF OHIO

FLUE BASE AND SOOT CHAMBER

Application filed May 3, 1930. Serial No. 449,519.

This invention relates to flue bases and has special reference to a flue base designed to form the intake of a chimney having a relatively large opening leading into the flue from the lower end of the chimney.

One important object of the invention is to provide an improved flue base structure so arranged as to cut off all air entering the chimney opening except that which may pass through the intake of the flue base.

A second important object of the invention is to provide a novel combintion of closure for the chimney opening and flue base.

A third important object of the invention is to provide a novel form of ash or cinder pit in combination with a flue base.

A fourth important object of the invention is the provision of an improved knock-down structure for such flue base.

With the above and other objects in view, the invention consists in general of certain novel details of construction and combinations of parts hereinafter more fully described, illustrated in the accompanying drawing and specifically claimed.

In the drawing, like characters of reference indicate like parts in the several views, and:—

Figure 1 is a vertical median section through a chimney flue and the improved flue base;

Figure 2 is a side elevation of the flue base proper separated from the other parts;

Figure 3 is a detail section on the line 3—3 of Figure 2;

Figure 4 is a vertical median section through one modification of the flue base proper;

Figure 5 is a similar section through a second modification.

In the invention as described in Figures 1, 2 and 3 the invention is shown as constructed of separate sections forming a bottom and rear section, a top and front section and two side sections. The bottom and rear section has a vertical rear wall portion 10 from the bottom edge of which an inclined rear wall 11 extends downwardly and forwardly to merge into a horizontal bottom wall 12. Flanges 13 extend forwardly and upwardly from the respective sections and are provided with slotted lugs 14. The top and front section has a vertical upper front wall 15 which is joined to a vertical lower front wall 16 by a downwardly and forwardly inclined top wall 17. The walls 15 and 17 are provided with flanges 18 having slotted lugs 19. The side walls 20 are shaped to fit between the two sections just described and fit against these walls at the insides of the flanges 13 and 18. Bolts 21 pass through these side walls and through the slots of the lugs 14 and secure the sections together so as to present a substantially smooth interior, the bolts having flat or countersunk heads on the inside of the structure so as not to interfere with the smooth flow of gases therethrough to an appreciable degree.

The bottom wall 12 has a depending flange 22 at its forward edge and the flange 23 of a nipple 24 is bolted to the flange 22 and wall 16 by bolts 25. This nipple serves to connect the smoke pipe of a furnace or the like to the flue base. Surrounding the nipple 24 is a collar or closure plate 26 which is secured over the opening 27 leading to the flue 28 by nail 29 or any other suitable means. This plate 26 is also fixed to the front and top section by bolts 30.

The lower part of the opening 27 and flue 28, beneath the flue base, is provided with a suitable lining 31 to form a cinder pit and the bottom section 12 is provided with a door 32 to permit cinders and the like which collect in the base to be dropped into the pit. Also the plate 26 is provided with a cleanout door 33 so that such cinders may be removed from the pit as desired.

In the form shown in Figure 4 there is provided a vertical back wall 34, a vertical front wall 35, a horizontal bottom 36 extending forwardly from the bottom edge of the wall 34, and a horizontal top wall 37 connected to the bottom edge of the wall 35 by an inclined wall 38. This form has the usual side walls 39.

In the form shown in Figure 5 the wall arrangement is the same as in Figure 4 except that the walls 34 and 36 are connected by an angled inclined wall 40.

In use, the effect of the flue base is to change the direction of flow of gases entering through the nipple from horizontal to vertical in a quiet manner without the production of eddies or back drafts.

The device may be constructed of cast or rolled iron, steel or other metal or may be constructed of terra cotta or other fire resistant material or may be constructed in part of one material and in part of another.

There has thus been provided a simple and efficient device of the kind described and for the purpose specified.

It is obvious that changes may be made in the form and construction of the invention without departing from the principles thereof. It is not, therefore, desired to confine the invention to the exact form herein shown and described, but it is desired to include all such as come within the scope claimed.

Having thus described the invention, what is claimed is:—

1. The combination with a chimney having a flue and an opening leading to the flue, of a flue base in the form of an elbow having a horizontal inlet portion passing into said opening and a vertical end entering the lower end of the flue, a collar fitting around the inlet of the flue base and closing the space of the opening therearound, the lower part of the opening forming a cinder pit below the flue base, and a door in the bottom of the flue base controlling communication between the flue base and cinder pit.

2. The combination with a chimney having a flue and an opening leading to the flue, of a flue base in the form of an elbow having a horizontal inlet portion passing into said opening and a vertical end entering the lower end of the flue, a collar fitting around the inlet of the flue base and closing the space of the opening therearound, means to hold the collar in fixed position relative to the elbow, the lower part of the opening forming a cinder pit below the flue base, and a door in the bottom of the flue base controlling communication between the flue base and cinder pit.

3. The combination with a chimney having a flue and an opening leading to the flue, of a flue base in the form of an elbow having a horizontal inlet portion passing into said opening and a vertical end entering the lower end of the flue, a collar fitting around the inlet of the flue base and closing the space of the opening therearound, the lower part of the opening forming a cinder pit below the flue base, a door in the bottom of the flue base controlling communication between the flue base and cinder pit, and in lining for said cinder pit.

4. The combination with a chimney having a flue and an opening leading to the flue, of a flue base in the form of an elbow having a horizontal inlet portion passing into said opening and a vertical end entering the lower end of the flue, a collar fitting around the inlet of the flue base and closing the space of the opening therearound, means to hold the collar in fixed position relative to the elbow, the lower part of the opening forming a cinder pit below the flue base, a door in the bottom of the flue base controlling communication between the flue base and cinder pit, and a lining for said cinder pit.

5. The combination with a chimney having a flue and an opening leading to the flue, of a flue base in the form of an elbow having a horizontal inlet portion passing into said opening and a vertical end entering the lower end of the flue, a collar fitting around the inlet of the flue base and closing the space of the opening therearound, the lower part of the opening forming a cinder pit below the flue base, a door in the bottom of the flue base controlling communication between the flue base and cinder pit, a lining for said cinder pit, and a door in the lower part of the collar affording access to the cinder pit.

6. The combination with a chimney having a flue and an opening leading to the flue, of a flue base in the form of an elbow having a horizontal inlet portion passing into said opening and a vertical end entering the lower end of the flue, a collar fitting around the inlet of the flue base and closing the space of the opening therearound, means to hold the collar in fixed position relative to the elbow, the lower part of the opening forming a cinder pit below the flue base, a door in the bottom of the flue base controlling communication between the flue base and cinder pit, a lining for said cinder pit, and a door in the lower part of the collar affording access to the cinder pit.

In testimony whereof I affix my signature.

BURT L. FLAHERTY.