Nov. 14, 1939. C. H. MORROW 2,180,212

DRAFT HOOD FOR WATER HEATERS OR THE LIKE

Filed Feb. 4, 1938

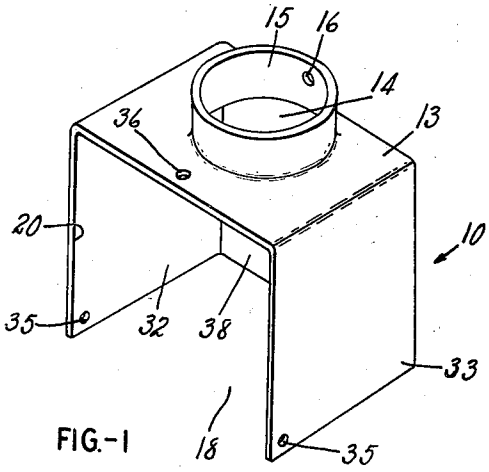


FIG.-1

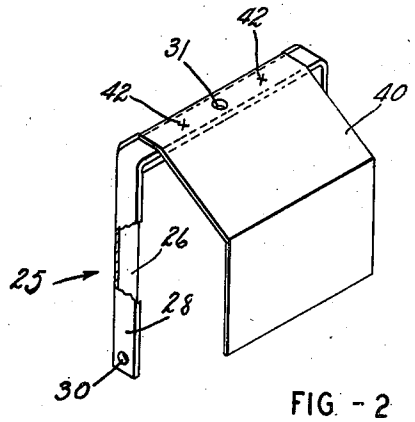


FIG. - 2

FIG.-3

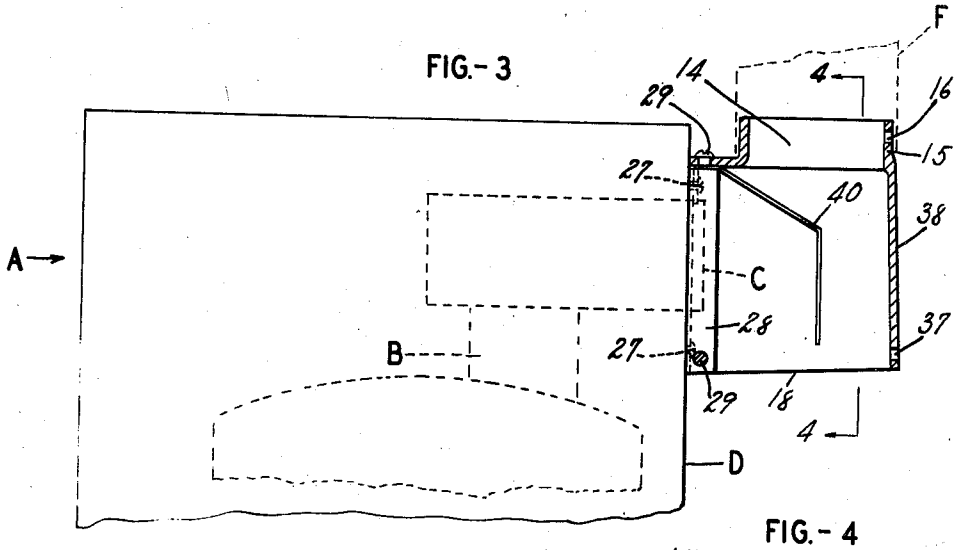


FIG.-4

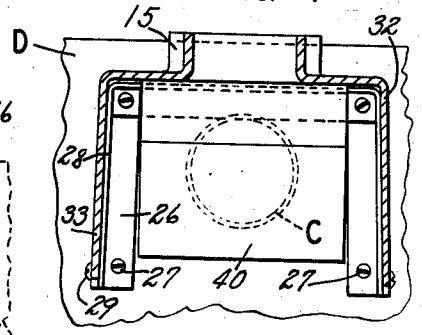
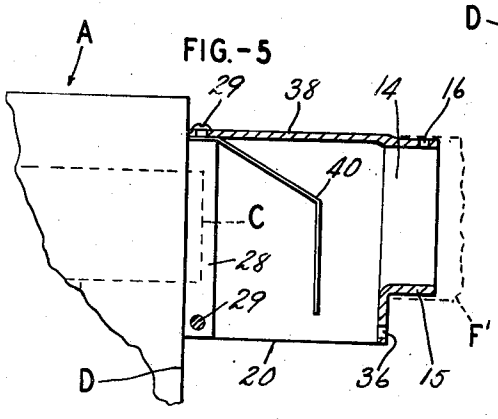


FIG.-5



INVENTOR
CLARENCE H. MORROW
BY
Burkett, Hyde, Higby & Mayer
ATTORNEYS

Patented Nov. 14, 1939 2,180,212

UNITED STATES PATENT OFFICE

2,180,212

DRAFT HOOD FOR WATER HEATERS OR THE LIKE

Clarence H. Morrow, Shaker Heights, Ohio, assignor to The Hotstream Heater Company, Cleveland, Ohio, a corporation of Ohio

Application February 4, 1938, Serial No. 188,605

3 Claims. (Cl. 126—299)

This invention relates to a draft hood for association with the flue outlet of a water heater or the like, said draft hood being adapted to have connected thereto the usual vent pipe for carrying to a chimney or stack the products of combustion formed in such water heater or the like.

In some installations of water heaters or the like, a generally horizontal disposition of the vent pipe which is connected to the draft hood is necessary or desirable, whereas in other installations, it is necessary or desirable to have such vent pipe generally vertically disposed.

The general object of the present invention, therefore, is the provision, for a water heater or the like, of a draft hood which is of such construction that either a generally horizontally disposed vent pipe or a generally vertically disposed vent pipe may be connected thereto.

More particularly, it is the general object of this invention to provide, for a water heater or the like, a draft hood which is of such construction that it may be secured to a water heater or the like in either of two positions, namely, in one position for the connection thereto of a generally horizontally disposed vent pipe and in another position for the connection thereto of a generally vertically disposed vent pipe.

A more specific object of the present invention is the provision, for a water heater or the like, of a "two positional" draft hood which is of simple and inexpensive construction, of strong and durable character, and of neat and pleasing appearance.

Another specific object of the present invention is the provision of simple and inexpensive means for use in effecting the securement of the present improved draft hood to a water heater or the like, over the flue outlet thereof, and which means also carries, in a simple and inexpensive manner, a suitable baffle plate for such flue outlet, said baffle plate lying within the chamber of the present improved draft hood.

Further objects of the present invention are in part obvious and in part will appear more in detail hereinafter.

The present invention will be clearly understood, and its advantages will be readily apparent, from the following description of one embodiment thereof, reference being had to the accompanying drawing, in which:

Fig. 1 is a perspective view of a draft hood embodying the present invention; Fig. 2 is a perspective view of one form of means for use in effecting the securement of the draft hood to a water heater or the like, and which means carries a baffle plate for the flue outlet of said water heater or the like; Fig. 3 is a view showing in more or less diagrammatic form the upper portion of a cabinet type water heater to which is secured the present draft hood, the position of securement of said draft hood being such as to enable a vertically disposed vent pipe to be connected thereto; Fig. 4 is a detail vertical sectional view of such draft hood in the position of securement shown in Fig. 3, the view being on the line 4—4, Fig. 3; and Fig. 5 is a view similar to Fig. 3 but showing the draft hood secured to said water heater in its other position of securement, for the connection to such draft hood of a generally horizontally disposed vent pipe.

Before the present invention is described in detail, it is to be understood that such invention is not limited to the details of construction and/or the specific arrangement of parts herein illustrated and/or described, as the invention obviously may take other forms. It also is to be understood that the phraseology or terminology herein employed is for the purpose of description and not of limitation, there being no intention and no desire to limit the present invention, as herein disclosed and as defined in the appended claims, beyond the requirements of the prior art.

As will hereinafter more fully appear, the present invention relates to a draft hood which includes (*a*) a wall opening for communicating association with a vent pipe which in turn communicates with a chimney or stack and (*b*) two other wall openings which may be of separate or of inter-communicating character. Each of such two other wall openings is adapted to serve either (1) as a products-of-combustion inlet opening, for communicating association with the flue outlet of a water heater or the like with which the draft hood is used, or (2) as an air opening, for communication with the atmosphere. As a result, a draft hood embodying the present invention may be selectively secured to a water heater or the like in either of two positions, namely, in one position for use with a generally horizontally disposed vent pipe and in another position for use with a generally vertically disposed vent pipe.

In construction and in form or shape, draft hoods embodying the present invention may vary or differ widely from the particular draft hood here shown for illustration and specific description, a draft hood which is particularly adapted for use with a cabinet type water heater, such as the water heater A partially and more or less diagrammatically shown in Figs. 3 and 5. Inasmuch as the details of construction of such water

heater form no part of the present invention, it is here sufficient merely to point out that such heater includes a suitable flue B for the products of combustion thereof, the outlet end C of such flue being located at or outside a wall of the cabinet of the heater, such as at or outside its rear wall D.

In the draft hood here illustrated, the openings heretofore referred to are provided in a chambered casing 10 which may be of any suitable material, such as metal, and of any suitable shape, and which casing may be stamped, cast or otherwise suitably formed, the casing here shown being a simple one-piece metal casting of generally rectangular, box-like character.

In one of its walls, such as in the wall 13, the casing 10 is provided with an opening 14 (termed an aperture in the appended claims) for communicating association with a suitable vent pipe for carrying to a chimney or stack (not shown) the products of combustion formed in the water heater A. Preferably, the size and shape of such wall opening 14 are such as to correspond with the vent pipe ordinarily used with water heaters, and for the convenient connection of such vent pipe with the casing 10, in communicating association with its wall opening 14, the wall 13 of such structure is provided around such opening with an outwardly extending annular flange 15, with which the vent pipe may be telescopically connected, as shown in Figs. 3 and 5. If desired, an aperture 16 may be provided in the annular flange 15, as here shown, to enable the vent pipe to be screwed or bolted to such flange, as will be readily understood.

As best shown in Fig. 1, the casing 10 is also provided with two other wall openings, namely, with a wall opening 18 located directly opposite the wall opening 14 and with a wall opening 20 located between the wall openings 14 and 18. The wall opening 18 and the wall opening 20 are each adapted to serve either (1) as a products-of-combustion inlet opening, for communicating association with the flue outlet C of the water heater A, or (2) as an air opening, for communication with the atmosphere.

As a result, the present draft hood may be secured to the rear wall D of the water heater A in either of two positions, namely, in the position shown in Fig. 3 or in the position shown in Fig. 5. In the position of securement shown in Fig. 3, the opening 14 of the casing 10 is located at the top thereof, with the annular flange 15 around such opening vertically disposed for telescopic connection with the correspondingly disposed vent pipe F. In such position, the wall opening 18 of the casing 10 is located at the bottom thereof and therefore serves as the draft hood air opening, whereas the wall opening 20 of the casing 10 is located alongside the rear wall D of the water heater cabinet, for communicating association with the outlet end C of the water heater flue B.

When the present draft hood is in its other position of securement, namely, in the position shown in Fig. 5, the wall opening 14 of the casing 10 is at the rear thereof, with the annular flange 15 around such opening horizontally disposed for telescopic connection with the correspondingly disposed vent pipe F'. In such position, the wall opening 20 of the casing 10 is at the bottom thereof and therefore such opening now serves as the draft hood air opening, whereas the wall opening 18 of the casing 10 is now located alongside the water heater rear wall D, for communicating association with the flue outlet end C of the water heater.

It is thus apparent that the present draft hood, because of its "two positional construction", is adapted for use with either a vertically disposed vent pipe or with a horizontally disposed vent pipe.

Although it is not necessary that the wall openings 18 and 20 of the present draft hood correspond in size and shape, as here shown, it is preferable that they do so, inasmuch as that will ensure for the draft hood at all times a bottom air opening of the same size and shape, as will be readily understood.

By omitting two walls of the casing 10, as here shown, the openings 18 and 20 thereof may be simply and economically formed, as it is not necessary that such openings be of separated or non-intercommunicating character.

In the embodiment of the invention here illustrated, the outlet end C of the water heater flue B lies slightly beyond the water heater rear wall D, so that such flue extends through that wall opening of the draft hood which lies alongside such wall, that is, through the wall opening 20 when the draft hood is in its position of securement shown in Fig. 3, and through the wall opening 18 when the draft hood is in its alternate or Fig. 5 position.

Any suitable means may be utilized to effect the securement to a water heater or the like of a draft hood embodying the present invention. The means utilized for effecting the securement of the draft hood here illustrated to the rear wall D of the water heater A, over the water heater flue outlet C, includes a simple stamped metal strip 25, the angle section of which provides such strip with flange means 26 for suitable securement, such as by the screws 27, to the water heater wall D and with flange means 28 projecting outwardly therefrom and to which the present draft hood may be telescopically related and suitably connected, such as by the screws 29, in either of its two positions hereinbefore referred to.

For such connection of the present draft hood to the metal strip 25, the flange means 28 of such strip is provided with a screw hole 30 in each of its two depending side portions and with a screw hole 31 in its top portion. For alignment with the strip screw holes 30, the walls 32 and 33 of the casing 10 are each provided with a screw hole 25, and for selective alignment with the strip screw hole 31, two screw holes are provided in the casing 10, namely, a screw hole 36 in the wall 13, for use when the present draft hood is to be secured in its Fig. 3 position for a vertically disposed vent pipe, and a screw hole 37 in the wall 38, for use when the present draft hood is to be secured in its Fig. 5 position for a horizontally disposed vent pipe F.

In practice, the metal strip 25 preferably is secured at the factory to the water heater wall D, in proper position relative to the water heater flue outlet C, and the present draft hood is connected, at the time of the installation of the water heater A, to the flange means 28 of the strip 25 in either the Fig. 3 position or the Fig. 5 position, depending upon whether the vent pipe for the heater is to be vertically disposed, as in Fig. 3, or horizontally disposed, as in Fig. 5, all as will be readily understood.

A suitable baffle plate 40, of sheet metal or the like, is here provided for the water heater flue outlet C, as is usual. As best shown in Figs. 3

and 5, said baffle plate lies within the chamber of the present draft hood, with its upper end portion riveted, welded or otherwise suitably secured, as at 42, to the flange means 28 of the metal strip 25, as best shown in Fig. 2. Inasmuch as the baffle plate 40 is secured to the metal strip 25, and not to the draft hood itself, the provision of such baffle plate does not interfere in any way with the securement of the draft hood, in either of its two positions, to such metal strip 25. Moreover, proper positioning of said baffle plate relative to the water heater flue outlet C is always insured.

Other features and advantages of the present invention will be readily apparent to those skilled in the art to which the invention relates.

What I claim is:

1. A draft hood for the flue of a water heater or the like, said draft hood comprising a casing having a wall aperture and an outwardly extending annular flange surrounding such aperture and adapted for telescopic association with a stack vent pipe, said casing also having two wall openings and being adapted for association in either of two positions with the flue of said water heater or the like so as to locate either of its said wall openings in communicating association with the outlet of the flue of such water heater or the like, with the other wall opening of such casing serving at such time as an air opening.

2. In combination with a water heater or the like having a flue for the products of combustion thereof, a chambered draft hood for such flue and having a wall aperture for communicating association with a stack vent pipe, said casing also having two wall openings, means for securing said casing to said water heater or the like in either of two positions so as to locate either of the wall openings of said casing in communicating association with the outlet of the flue of said water heater or the like, the other wall opening of the casing serving at such time as an air opening, and a baffle plate for the outlet of the flue of said water heater or the like and arranged within the chamber of said draft hood.

3. In combination with a water heater or the like having a flue for the products of combustion thereof, a draft hood for such flue and having a wall aperture for communicating association with a stack vent pipe, said draft hood also having two wall openings, means for securing said draft hood to said water heater or the like in either of two positions so as to locate either of the wall openings of said casing in communicating association with the outlet of the flue of said water heater or the like, the other wall opening of the casing serving at such time as an air opening, and a baffle plate in said draft hood for the outlet of the flue of said water heater or the like and carried by such securing means.

CLARENCE H. MORROW.