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J. T. BAYLISS
FLUE COVER AND DEFLECTOR

1,706,389

Filed Aug. 22, 1928

Fig. 2

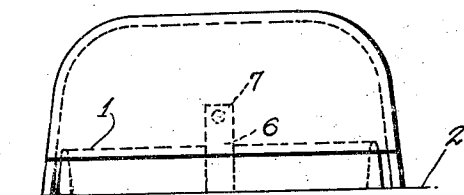
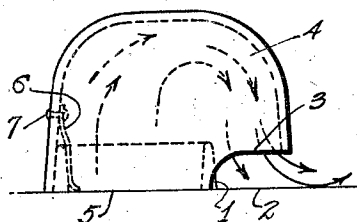


Fig. 1

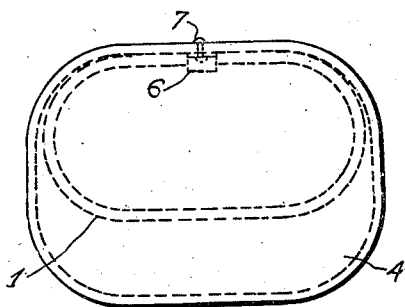


Fig. 3

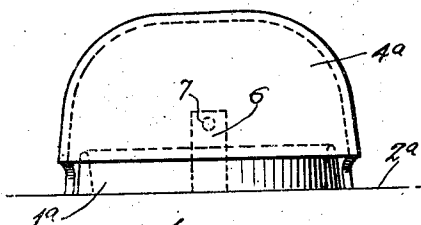


Fig. 5

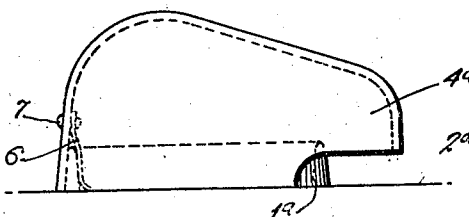
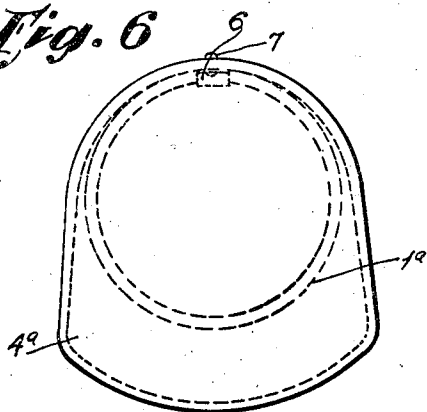


Fig. 4

Fig. 6



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FLUE COVER AND DEFLECTOR.

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This invention relates, generally, to gas range accessories and is more particularly directed to a device adapted to be demountably associated with the flue collar of a gas cooking range for the purpose of covering the open top of such flue and deflecting the waste products of combustion in a downwardly and forwardly direction whereby their tendency to be deposited on to the walls of the kitchen is minimized.

It is well recognized that when waste products of an oven including the waste products of combustion together with steam, vapor and other products of cooking operations are discharged through the flue, they are generally in the form of greasy, sooty vapor which, if discharged upwardly adjacent the wall of the kitchen, will impinge and be deposited on such wall and on the ceiling. Careful housewives are called upon to clean the walls of the kitchen frequently to remove deposits thus occasioned and these deposits are not only unsightly and unsanitary but detrimentally affect paint and enamel finishes with which the walls are provided.

This situation has long been recognized and numerous adjuncts have been suggested for disposing of the waste products of the oven so that they will not adhere to the walls of the kitchen. The most common expedient is to fit a housing on the flue collar and to provide within this housing one or more layers or bodies of steel wool which is intended to serve as a screen in order to sift out the gas and vapor particles of sooty and other foreign matter. These so-called steel wool filters have been quite extensively used, but are open to the objection that they have to be cleaned from time to time in order to prevent clogging or giving off of offensive odors.

The object of the present invention is to provide a simple and efficient form of construction which, in contradistinction to prior practice, may be seated on the stove top or extension thereof so as to overlie the top of the flue and which device is so shaped or configured that it will operate as a deflector to receive the products of the oven and to deflect and discharge them in an upward and forward direction onto the stove top. Generally in stove construction, there is a burner relatively adjacent the flue and when such a burner is in operation, the products of the oven are deflected by the present invention directly on to its burner, so that they are

thereby consumed. As a result, there are no greasy or sooty particles permitted to float about the room and deposit upon the walls or ceiling. In some forms of gas range, there is no burner immediately adjacent the flue, but even in such cases, the entire stove will be more or less hot when the oven is in operation, so that when the products of the oven are deflected by the device of this invention, they will impinge upon the adjacent part of the stove and be deposited there at a point where they can be readily wiped off from time to time or burned off by subsequent operation of the burners.

In any event, the device of this invention will save the walls and ceiling of the kitchen from sooty and greasy deposits and has the further advantage that the interior of the device is wholly unencumbered by steel wool or analogous bothersome filters.

An important feature of the present invention resides in the fact that it is so constructed as to cooperate with a wide variety of flues so that one or two models will serve to fit the flue of any make of gas range. This is important from a commercial standpoint as the necessity of carrying a large variety of sizes is entirely eliminated. In this connection, it is of importance that the device of this invention is shaped to seat or rest directly upon the top of the stove or an extension thereof, so that it is not dependent, as all prior constructions are, upon a relatively tight rigid mounting on a pipe section which must fit tightly over the flue collar of the range.

Features of the invention, other than those adverted to, will be apparent from the hereinafter detailed description and claims, when read in conjunction with the accompanying drawings.

The accompanying drawings illustrate different practical embodiments of the invention, but the constructions therein shown are to be understood as illustrative, only, and not as defining the limits of the invention.

Figure 1 is a side elevation of a flue deflector embodying the present invention and adapted for use with an oval flue.

Figure 2 is a front elevation of the deflector.

Figure 3 is a plan view thereof.

Figures 4, 5 and 6 correspond to Figures 1, 2 and 3, but illustrate the deflector as constructed for use with a circular flue.

Referring to the drawings and more par-

ticularly to Figs. 1 to 3, inclusive, 1 designates the flue collar of a gas range which extends above the top of the stove 2. This is the usual conventional stove structure and in these figures the collar is of oval configuration as shown best in Fig. 3. The same general arrangement of stove construction is exhibited in Figs. 4, 5 and 6 except that the flue collar 1^a is circular and rises above the stove top 2^a. In all stove constructions now generally found on the market, the collars are of either of the shapes shown and vary in size within relatively small limits.

In the construction of the device of this invention as shown in Figs. 1 to 3, the cover and deflector comprise a bowl shaped casting or stamping provided with an open bottom with one portion of the under side of the same cut away as shown at 3, so that the forward portion of the device is in the form of an overhanging deflector lip 4. It will be noted, however, that the cut away part 3 extends backwardly less than half of the depth of the device so that the center of gravity is rearwardly of the cut away part 3. As a result of this arrangement, the device is adapted to rest in a state of equilibrium upon the lower edge 5 as illustrated in Figs. 1 and 2.

In Figs. 1, 2 and 3, the device is made of an oval shape to better cooperate with the oval collar 1 whereas in Figs. 4, 5 and 6 the device is of a generally circular contour with a slight flare to the front. In other words, in these latter figures, the overhanging deflector lip 4^a is slightly flared as shown best in Fig. 6, so as to give sufficient capacity to the outlet as would preclude choking at the deflector mouth.

In both forms of the invention, the device is adapted to rest by its own weight upon the top of the stove, in such manner that the device will overlie the collar. Said device is made sufficiently large to fit loosely about the collar so as to compensate for collars of widely varying sizes and slightly different shapes. However, to preclude shifting of the device rearwardly, a leaf spring 6 may be conveniently employed. This spring is secured by means of a rivet 7 to the interior of the device and at the back thereof and is adapted to engage with the inner face of the collar to hold the inner surface of the back wall against the collar and clamp the collar between said surface and the spring. This spring is found in practice to be thoroughly efficient in holding the device against inadvertent shifting, but its structure is such that the device may be readily positioned on or removed from the stove when desired.

The device is preferably so shaped as to substantially conform to that portion of the collar with which it is held in contact by the spring and it is of sufficient depth so that its downwardly curved deflector lip will project well forward of the collar while the cut away

is of sufficient dimensions to allow of a proper outlet for the products of combustion, vapors, etc.

When the device is in position on a range, such products of combustion with the particles of grease, soot and other extraneous matter entrained therein pass upwardly through the flue and out of the top of the collar directly into the confines of the device of this invention. The interior of such device is in the form of an even sweep extending from back to front and such products are thereby deflected forwardly and thence downwardly through the cut away 3 as indicated by the arrows in Fig. 1 and out through the opening beneath the deflector lip on to the top of the stove or the top of the oven as the case may be.

When the oven is in operation, these parts of the stove are heated to a high degree, so that the extraneous matter impinging on the heated stove parts will adhere thereto and be consumed. This is particularly true where the outlet to the flue is positioned adjacent an open burner. In this latter instance the burner will, if in operation, consume all extraneous matters in the exhaust gases as they leave the deflector lip. The device of this invention is preferably made in the form of a casting wherein its weight will be sufficient to firmly maintain it in position. It is durable and embodies no parts that can fail to operate because there are no real movable parts in the construction.

The device may be used indefinitely without any cleaning or attention whatsoever as the interior thereof is wholly unencumbered. In some forms of the invention, the free edge of the deflector lip may be scalloped or otherwise configured for the purpose of ornamentation, but in the drawings the device is shown perfectly plain in the interest of clearness. These drawings show the invention in its preferred practical forms, but the invention is to be understood as fully commensurate with the appended claims.

Having thus fully described the invention, what I claim as new and desire to secure by Letters Patent is:

1. A flue cover and deflector for gas ranges embodying an inverted bowl shaped shell, the major portion of the lower edge of which is flat to permit such flat edge to rest upon the top of a stove in a position to loosely embrace the flue collar thereof, and the forward portion of the lower edge of which shell is cut away to provide an outlet, the portion of the shell above which constitutes a forwardly projecting overhanging deflector lip extending forwardly beyond the flue collar and downwardly into spaced apart relation with the top of the stove whereby gases and vapors passing outwardly through the flue of the stove are adapted to be caught within the shell and deflected forwardly and downward-

ly thereby and out of the outlet beneath the overhanging deflector lip.

2. A flue cover and deflector for gas ranges embodying an inverted bowl shaped shell, the
5 major portion of the lower edge of which is flat to permit such flat edge to rest upon the top of a stove in a position to loosely embrace the flue collar thereof, and the forward portion of the lower edge of which shell is cut
10 away to provide an outlet, the portion of the shell above which constitutes a forwardly projecting overhanging deflector lip extending forwardly beyond the flue collar and downwardly into spaced apart relation with
15 the top of the stove, whereby gases and vapors passing outwardly through the flue of the stove are adapted to be caught within the shell and deflected forwardly and downwardly thereby and out of the outlet beneath
20 the overhanging deflector lip, and means for clamping the shell to the flue collar to permit of inadvertent movement of the shell relative thereto.

3. A flue cover and deflector for gas ranges
25 embodying an inverted bowl shaped shell, the major portion of the lower edge of which

is flat to permit such flat edge to rest upon the top of a stove in a position to loosely embrace the flue collar thereof, and the forward portion of the lower edge of which shell is
30 cut away to provide an outlet, the portion of the shell above which constitutes a forwardly projecting overhanging deflector lip extending forwardly beyond the flue collar and downwardly into spaced apart relation with
35 the top of the stove whereby gases and vapors passing outwardly through the flue of the stove are adapted to be caught within the shell and deflected forwardly and downwardly thereby and out of the outlet beneath
40 the overhanging deflector lip, and a leaf spring secured interiorly of the shell intermediate its top and bottom of the latter and projecting downwardly to substantially the
45 lower edge of the shell, said leaf spring being adapted to extend into the flue to clamp the shell to the collar thereof and preclude inadvertent movement of the shell relative to the collar.

In testimony whereof I have signed the
50 foregoing specification.

JOHN T. BAYLISS.