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GAS RANGE TOP UNIT
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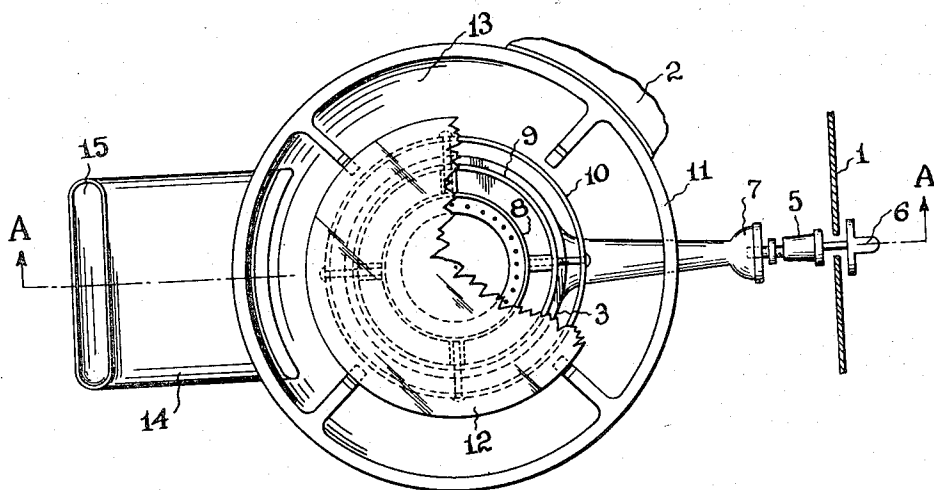


FIG. 1

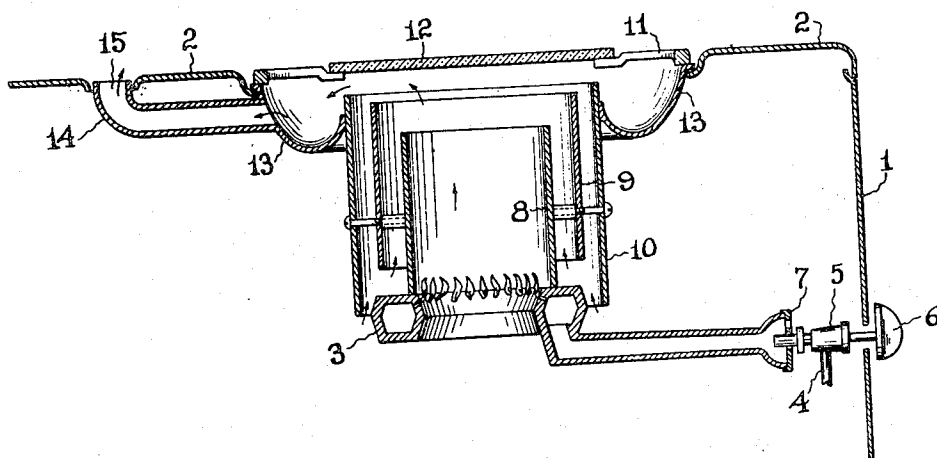


FIG. 2

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GAS RANGE TOP UNIT

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This invention relates to a gas range top unit and more particularly to a burner combination in which the heated air is conducted directly toward the area to be heated without unduly heating the rest of the cooking top. It is well known in the art to make use of a plurality of perforated chimney burners in which combustion takes place; but the tendency has been to heat not only the area immediately below the cooking vessel but to heat also the adjacent top of the range or stove.

One of the objects of this invention is to provide a gas range cooking top unit which is made up of a plurality of concentrically arranged imperforate cylinders which are so disposed as to conduct the products of combustion upwardly toward the area to be heated and to reduce to a minimum the tendency to heat the portions outside of the cooking area.

Another object of this invention is to provide a cooking top unit which includes a gas burner over which is disposed a plurality of imperforate cylinders which are so disposed and arranged as to direct the products of combustion upwardly toward the cooking vessel without unduly heating or overheating the top of the stove adjacent such cooking area.

Another object of this invention is to provide a cooking burner unit in which a plurality of cylinders are so disposed and arranged as to direct the products of combustion upwardly toward the area desired to be heated without, however, unduly heating the entire cooking top of the stove.

Further and more limited objects of the invention will appear as the description proceeds and by reference to the accompanying drawing and specification in which

Fig. 1 is a top plan view of a burner and associated facilities which will accomplish the objects of my invention; and

Fig. 2 is a fragmentary vertical sectional view taken substantially on the line A—A of Fig. 1, the parts being somewhat diagrammatically shown in order to bring out the distinguishing features of the invention.

Referring now to the drawings, the reference character 1 designates the front wall of a stove or gas range above which is disposed a top plate 2. Disposed below the top plate 2 is a gas burner 3 which is preferably formed of cast iron and which is generally annular in shape. Leading into the burner is a gas supply line 4 which is controlled by a valve 5 which is operated by a valve handle 6. Primary air is delivered to the

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burner through an air shutter 7. Disposed over the gas burner 3 is an imperforate cylinder 8 which may be supported in any suitable manner. This cylinder 8 preferably rests upon the top of the burner and is supported thereby. Disposed outwardly and in concentric relation thereto is another imperforate cylinder 9 which may be supported in any suitable manner. This cylinder 9 is somewhat larger than the cylinder 8 and has its bottom portion disposed slightly above the cylinder 8. Outside of and concentrically disposed with respect thereto is another imperforate cylinder 10 which is somewhat larger than the gas burner 3. These three cylinders designated by the reference characters 8, 9 and 10, are concentrically arranged and their lower ends are open so as to admit the passage of air there-through.

The burner 3 is disposed below the flat cooking top of the stove and overlying the burner is a grate 11 which is preferably formed of cast iron and over which is disposed a glass plate 12. The grate may be formed in one piece or it may consist of a plurality of parts. Preferably the grate is disposed substantially flush with the flat top of the stove or range so that vessels may be moved freely thereabout. The gas burner 3 is disposed below the top of the range and the products of combustion are directed upwardly toward the grate or the area to be heated. The several cylinders serve to direct the products of combustion toward the grate. The grate may be insulated, if desired, from the adjacent portions of the range. The idea is to conduct the products of combustion toward the grate without unduly heating the adjacent portions of the cooking top. Disposed over and surrounding the grate is a burner pan 13 which serves to receive the overflow from a cooking vessel which may be positioned over the cooking top. This burner pan 13 is generally annular in shape and is supported by the cooking top as will appear most clearly in Fig. 2. The ports or outlets of the burner are disposed inwardly at an angle so that the burner flames do not impinge upon the metal frame of the burner.

The concentrically arranged imperforate cylinders serve to guide and to direct the currents of heated air upwardly toward the area which is desired to be heated. The reference character 14 designates a flue which leads outwardly toward an opening 15 which serves to provide an outlet for the products of combustion of the burner. This flue 14 is in the shape of a tube or channel which is connected with the burner

pan 13 so that the products of combustion may escape should a vessel be placed over the cooking top which would preclude escape of such products of combustion upwardly, as a safety measure.

The concentrically arranged cylinders serve to provide channels to direct heated air toward the area to be heated and to reduce to a minimum the tendency to heat the rest of the cooking top outside of the area desired to be heated. The form of the top grate or plate is not particularly essential as it may be formed in part of metal or glass or it may even be a part of the top of the stove. The flue 14 serves as a safety factor should a large vessel be placed over the burner and thus thereby release the products of combustion at one side or toward the rear of the cooking top. The heat produced by the burner serves to induce a current of air upwardly toward the area to be heated and limits it to such area without unduly heating the rest of the cooking top. The burner pan 13 serves to collect any overflow from the vessel being heated. The burner ports are not subject to being clogged by reason of overflow and are protected by the burner pan 13. The top plate or grate is preferably positioned flush with the main top of the stove.

It will now be clear that I have provided a gas range top unit which will accomplish the objects of the invention as hereinbefore stated. It is to be understood that various changes may be made in the adaptations and construction of the stove and range without departing from the spirit of the invention and the embodiments herein disclosed are to be considered merely as illustrative and not in a limiting sense as the invention is limited only in accordance with the scope of the prior art and the appended claims.

Having thus described my invention, I claim:

1. In a device of the character described the combination of a ring shaped gas burner disposed below an opening through a range top and having a plurality of orifices through the inner wall thereof, an open ended imperforate cylinder of greater diameter than said burner arranged concentrically of said burner between said burner and said opening with the lower end thereof disposed below the top surface of said burner, an inner imperforate open ended cylinder arranged concentrically of said outer cylinder with the lower end thereof engaging the top of said burner between the outer and inner walls thereof, an intermediate open ended imperforate cylinder arranged concentrically of said outer and inner cylinders with the lower end thereof spaced from the top of said burner, and a utensil supporting grate overlying said opening and spaced from the upper ends of said cylinders.

2. In a device of the character described the combination of a ring shaped gas burner disposed below an opening through a range top and having a plurality of orifices through the inner wall thereof, an open ended imperforate cylinder of greater diameter than said burner arranged concentrically of said burner between said burner and said opening with the lower end thereof disposed below the top surface of said burner, an inner imperforate open ended cylinder arranged concentrically of said outer cylinder with the lower end thereof engaging the top of said burner between the outer and inner walls thereof, an intermediate open ended imperforate cylinder arranged concentrically of said outer and inner cyl-

inders with the lower end thereof spaced from the top of said burner, a utensil supporting grate overlying said opening and spaced from the upper ends of said cylinder and an annular pan disposed below said opening and surrounding the upper end of said outer cylinder.

3. In a device of the character described the combination of a ring shaped gas burner disposed below an opening through a range top and having a plurality of orifices through the inner wall thereof, an open ended imperforate cylinder of greater diameter than said burner arranged concentrically of said burner between said burner and said opening with the lower end thereof disposed below the top surface of said burner, an inner imperforate open ended cylinder arranged concentrically of said outer cylinder with the lower end thereof engaging the top of said burner between the outer and inner walls thereof, an intermediate open ended imperforate cylinder arranged concentrically of said outer and inner cylinders with the lower end thereof spaced from the top of said burner, an annular pan disposed below said opening and surrounding the upper end of said outer cylinder, a utensil supporting grate overlying said opening and spaced from the upper ends of said cylinders, and an imperforate plate supported by said grate concentrically with said cylinders the diameter of said plate being greater than the diameter of said outer cylinder and less than the diameter of said opening.

4. In a device of the character described the combination of a ring shaped gas burner disposed below an opening through a range top and having a plurality of orifices through the inner wall thereof, an open ended imperforate cylinder of greater diameter than said burner arranged concentrically of said burner between said burner and said opening with the lower end thereof disposed below the top surface of said burner, an inner imperforate open ended cylinder arranged concentrically of said outer cylinder with the lower end thereof engaging the top of said burner between the outer and inner walls thereof, an intermediate open ended imperforate cylinder arranged concentrically of said outer and inner cylinders with the lower end thereof spaced from the top of said burner, an annular pan disposed below said opening and surrounding the upper end of said outer cylinder, a utensil supporting grate overlying said opening and spaced from the upper ends of said cylinders, and a flue arranged to conduct products of combustion from said pan and to discharge them at a point remote from said opening.

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