

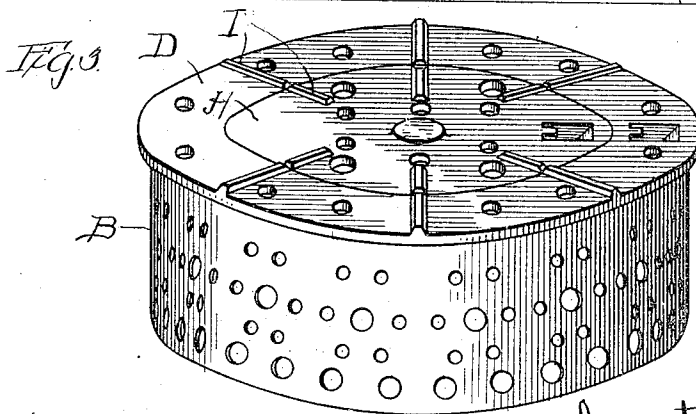
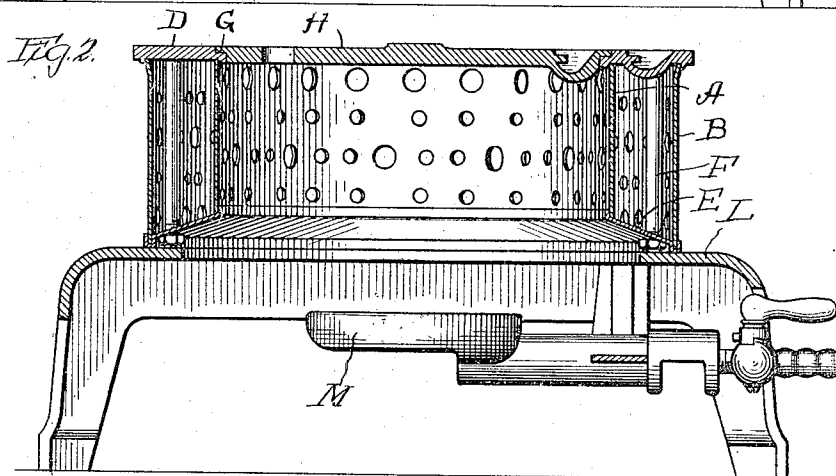
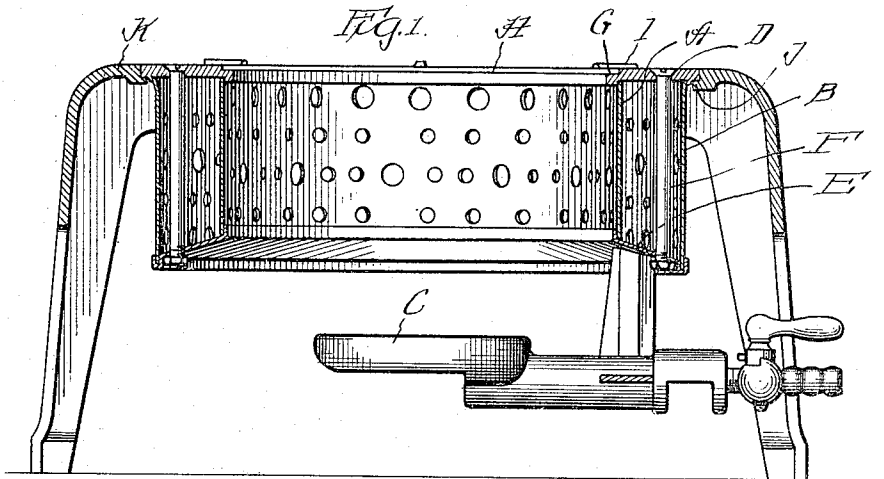
A. BRUEBACH.

GAS STOVE.

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1,205,152.

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UNITED STATES PATENT OFFICE.

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GAS-STOVE.

1,205,152.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, AUGUST BRUEBACH, citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Attachments for Gas-Stoves; 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.

This invention has for its object to provide an attachment for gas stoves which may be variously applied to or embodied in gas stoves, and is intended and adapted to afford a radiating surface for heating the room in which the gas stove is located simultaneously with the heating of cooking utensils disposed on the stove and, to accomplish other objects as follows: First: to provide an attachment for gas stoves which will serve to cause air to become intimately associated with the flame whereby sufficient oxygen is added to effect complete combustion of all gas and to prevent smudging. Second: to provide an attachment of the character defined by means of which the hot products of combustion are directed upon the cooking utensils disposed above the burner without, however, causing the flame to impinge directly upon or spread beyond the edges of the bottom of the utensil, thus preventing smudging of the latter. Third: to provide an attachment for gas stoves whereby the heat of the flame may be concentrated directly upon the bottom of the cooking utensil in order to effect rapid cooking, or may be caused to impinge upon the same indirectly whereby to cause the cooking to be more slowly accomplished and the balance of the heat units to be utilized for heating the air of the room in which the gas stove is located. Fourth: to provide an attachment of the character defined which will prevent overflow liquid from cooking utensils from flowing upon the gas burner and extinguishing the flame or interfering with the free burning of the same. Fifth: to provide an attachment of the character defined which will accumulate intensely hot air and products of combustion underneath the bottom of the cooking utensil, and hold the same for a sufficient period to enable the heat thereof to be more effectually absorbed by the cooking utensil and its contents whereby to

effect a saving in fuel. Sixth: to provide an attachment of the character defined which will create a circulation of hot products of combustion to impinge upon the bottom of the cooking utensil and will effect a partial return and reheating of such hot products of combustion whereby to effect economy in fuel.

Other objects of the invention will be apparent from the following specification.

In the accompanying drawing showing a suitable embodiment of the invention: Figure —1— is a central vertical section of a gas stove equipped with an attachment constructed in accordance with my invention showing said attachment dropped into a burner opening of and supported along its upper edges by the top plate of the stove. Fig. —2— is a view similar to Fig. —1— showing the attachment supported upon the top plate of the stove and projecting above the same. Fig. —3— is a perspective view of the attachment removed from the stove.

My said attachment comprises a cylindrical member having concentric perforated cylindrical walls A and B, the latter being of larger diameter than the former, and the former being of greater diameter than the burner C, which is circular and of the character usually employed in gas stoves, said wall A being preferably of greater diameter than the normal diameter of the flame issuing from said burner. The said cylindrical walls A and B are joined along their upper and lower edges by means of a top plate D, which is flat and perforated, and a bottom plate or member E which is in the form of a truncated cone. The said plates D and E are firmly secured to the upper and lower edges of the walls A and B by means of the bolts F in a well-known manner. The top plate D is provided with an annular off-set flange G upon which a central cover-plate H is adapted to be supported, the latter being removable at will. Said plate D and cover-plate H are provided with radial ribs I, upon which the bottom of a cooking utensil is adapted to rest, thus providing a shallow free space between such bottom and the opposed faces of said members D and H. The cover-plate H is also perforated, as shown in Fig. —3—.

In the construction shown in Fig. —1— the top plate D of my said attachment rests upon the shoulders J in the opening in the top wall K of the stove, upon which a grate

is ordinarily supported, so that the cylindrical portion of said attachment projects downwardly below said plate K. In this instance the burner C and its feed-pipe and valve controlling the same, are shown as supported by and constituting a part of the attachment, but it will be obvious, of course, that said burner may be suspended within the stove independently of said attachment.

As shown in Fig. —2—, my said attachment may also be set upon the top plate L of the gas stove, or upon the grate usually mounted in the burner opening, the construction thereof being identical with that shown in Fig. —1—. In the instance illustrated in Fig. —2—, the burner M is supported from the top plate L of the stove and the distance from the top of same to the bottom of the attachment is about the same as in the construction illustrated in Fig. —1—.

It will be apparent that my said attachment constitutes a short flue through which the hot products of combustion pass upwardly from the burner C through the central opening in the top plate D, when the cover H is removed, and will impinge directly upon the bottom of a cooking utensil supported upon the ribs of said member D.

A portion of said hot products escape laterally through the spaces bordered by said ribs I, and such portion thereof as does not pass through said spaces will pass through the perforations of the wall A into the space between the same and the wall B and partly through the perforations in the latter, the said walls thus becoming hot and affording radiating surfaces to heat air for warming the room. The upward passage of the hot products of combustion through the flue thus formed will obviously create a draft and a circulation within the central space bordered by the wall A and also between said walls A and B, and the draft created will cause air to be drawn into the central space, which will become admixed with the hot products of combustion and supply further oxygen for rendering such combustion perfect and thus avoid waste of fuel. Air will also enter said space through the perforations in the lower portions of the walls A and B, while a passage of hot products of combustion and hot air admixed therewith will pass in the opposite direction through the perforations in the upper ends of said walls A and B, thereby creating a circulation within the space between said walls which will effect the return flow of some of the hot products of combustion and air admixed therewith into the central space where they will attain a higher temperature and again pass upwardly. In this case a considerable volume of hot products of combustion and air will accumulate in the upper portion of the central space below the bottom of the cooking utensil and

the heat be rapidly absorbed therefrom by the said utensil and its contents, but such of the heat as is not absorbed thereby will be utilized to heat the surrounding surfaces, and by convection will heat the room. The attachment further will prevent any overflow liquid from the utensil from flowing upon or into the gas burner and extinguishing the flame or interrupting the flow of gas from any part thereof.

When the cover H is placed over the opening in the member D only a relatively small portion of the hot products of combustion will find their way to impinge upon the bottom of the cooking utensil, thus preventing the contents of the latter from cooking as rapidly as when said cover is removed, and in that event the accumulation of gases underneath the cover and the circulation through the perforations of the walls A and B and within the space between said walls will be materially increased and said walls, and parts surrounding same, or contiguous thereto, will be heated to a greater degree, and thus the heat units utilized to more rapidly heat the room.

My said device is very advantageous and economical and may, as will be obvious, be removed and replaced at will. It is also very cheap, durable and efficient. My said device is very cheap and may be used in connection with the burners generally provided for gas stoves of all makes and is particularly adapted for use on stoves having very cheap burners in which frequently there is a great possibility for the escapement of unconsumed gas afforded. My device by acting to concentrate the heat and intimately admixing fresh air with the gas flowing from the burner will insure complete combustion of all gas, and thus prevent the escape of any unburned gas into the room.

I claim as my invention:—

1. In a gas stove having a burner suitably supported, a cylindrical member disposed substantially concentric with and above said burner and constituting a flue, said member having concentric perforated walls and having its inner wall of greater diameter than the normal diameter of the flame delivered from said burner and an annular perforated support for a cooking utensil mounted directly upon the upper edges of said walls and closing the upper end of the space between the latter and a removable perforated cover for the central opening in said support.

2. In a gas stove having a burner suitably supported a cylindrical member disposed substantially concentric with and above said burner and constituting a flue, said member having concentric perforated walls and having its inner wall of greater diameter than the normal diameter of the flame delivered

from said burner and a perforate annular support for a cooking utensil mounted upon the upper edges of said walls and substantially closing the upper end of the space between said walls, and a perforate removable cover for the central opening in said support.

3. In a gas stove having a burner suitably supported a cylindrical member disposed substantially concentric with and above said burner and constituting a flue, said member having concentric perforated walls and having its inner wall of greater diameter than the normal diameter of the flame delivered from said burner and an annular perforate support for a cooking utensil fixed upon the upper edges of said walls and substantially closing the space between same, and a bottom for said member consisting of an im-

20 perforate truncated upwardly and inwardly inclined cone.

4. In a gas stove, a burner suitably sup-

ported, a heat distributing element above the burner comprising a cylindrical member having perforated side walls, open at its lower end, and arranged centrally above the burner and of larger diameter and constituting a flue, a concentric perforated wall spaced from the cylinder and providing an annular flue surrounding the cylindrical member, said annular flue closed at its lower end by an upward and inwardly coned plate joined to the outer wall and the lower end of the cylinder, said annular space closed at its upper end by a flat perforated plate re-

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movably closing the upper end of said cylinder.

In testimony whereof I have signed my name in presence of two subscribing witnesses.

AUGUST BRUEBACH.

Witnesses:

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."