J. SCHIRRA.

GAS BURNER BAFFLE.

APPLICATION FILED MAY 26, 1908.

913,567.

Patented Feb. 23, 1909.

Fig. 5.

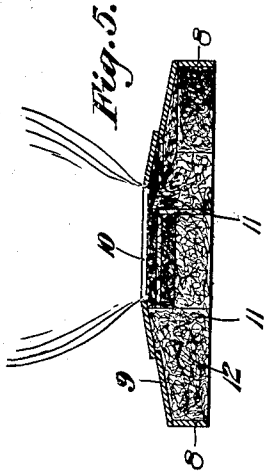


Fig. 6.

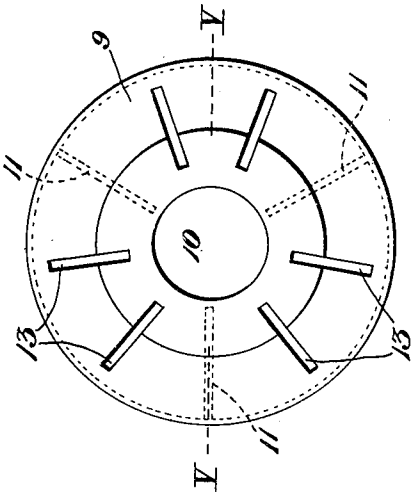


Fig. 3.

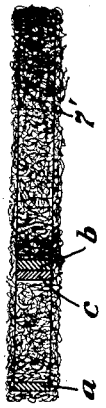


Fig. 4.

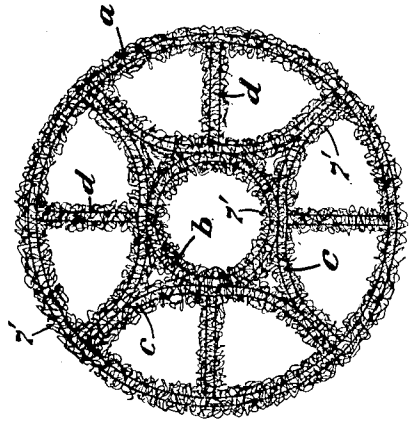


Fig. 1.

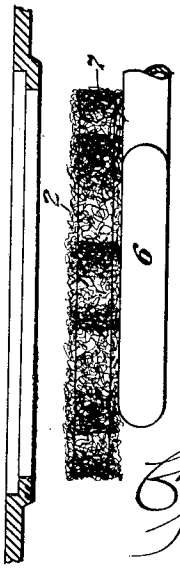
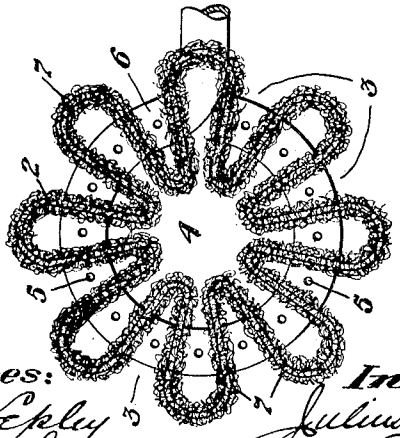


Fig. 2.



Witnesses:

Chas. S. Lepley

Henry Sons.

Inventor:

Julius Schirra

by C. M. Clarke

his attorney

UNITED STATES PATENT OFFICE.

JULIUS SCHIRRA, OF PITTSBURG, PENNSYLVANIA, ASSIGNOR, BY DIRECT AND MESNE ASSIGNMENTS, OF SEVENTEEN-SIXTIETHS TO PETER WEINKAUF AND ONE-THIRD TO ELMER A. LORTZ, BOTH OF PITTSBURG, PENNSYLVANIA, AND ONE-TENTH TO HENRY C. SCHWARTZ, OF MILLVALE, PENNSYLVANIA.

GAS-BURNER BAFFLE.

No. 913,567. Specification of Letters Patent. Patented Feb. 23, 1909.

Application filed May 26, 1908. Serial No. 435,095.

To all whom it may concern:

Be it known that I, JULIUS SCHIRRA, a citizen of the United States, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Gas-Burner Baffles, of which the following is a specification, reference being had therein to the accompanying drawing.

My invention refers to improvements in burners for gas stoves, and consists of a flame-deflecting and combustion-assisting device, adapted to be laid over the ordinary burner of a gas stove, for the purpose of breaking up the flame, facilitating the supply and admixture of the air with the gas, providing means for holding and radiating the heat, and for deflecting and delivering the products of combustion against the article to be heated.

The invention is more fully hereinafter described, reference being had therein to the accompanying drawings, in which:—

Figure 1 is a view in side elevation of one form of the device, showing its position on the burner proper of an ordinary cook stove. Fig. 2 is a plan view of the construction of Fig. 1. Figs. 3 and 4 are similar views showing modified constructions. Fig. 5 is a transverse vertical section indicated by the line V. V. of Fig. 6, illustrating a further modified form. Fig. 6 is a plan view of Fig. 5.

The invention consists generally of a preferably circular framework of metal or of a suitable non-combustible material, as asbestos, so arranged that it will provide a stiffening structure adapted to be laid upon a burner of any suitable construction, and of sufficient depth to admit of the admixture of the air with the gas as it passes up through the device and so arranged that the flames will be broken up or baffled, the interior portion of the baffle being covered with a suitable non-combustible material, preferably asbestos.

In the construction shown in Figs. 1 and 2, the main frame of the device consists of a band of metal 2 formed into series of lobe-shaped convolutions with intervening spaces 3 arranged around a central cavity 4. As thus constructed it will be seen that a disk-like annular series of alternate spaces and radially arranged frame arms is provided, as well as the central aperture, and that thereby ample provision is made for the upward passage of the gas and air through said openings as the gas emerges from the jet openings 5 of any suitable burner 6, upon which the device is set. The frame 2 is covered at all parts as shown with asbestos fiber 7 of a light feathery character, which forms a partial obstruction across the path of the gases and which will partially interfere with and disturb their upward travel, permitting ample admixture with the air and resulting in perfect combustion and temporary absorption of a large amount of heat by the asbestos and resulting radiation therefrom.

In the construction shown in Figs. 3 and 4 I form the main frame of strips of asbestos board, arranged to provide an outer circular branch band *a*, an inner circular ring *b* and intervening connecting frame members *c*, *d*, arranged in any suitable manner to provide a good body or frame and connected together by cement, wiring, or otherwise. These elements, as shown, are set edgewise and provide ample clearance space for passage of the gases, and are likewise covered with asbestos fiber 7′ in the same manner as above described.

In the form of the device shown in Figs. 5 and 6, I provide a circular frame of asbestos board or fiber 8 having an upper inwardly sloping coping 9 surrounding a central outlet aperture 10, and within such shell I apply to the interior walls and laterally arranged ribs or arms 11, a similar covering of asbestos fiber 12, the construction in such case also consisting entirely of asbestos in different forms. The device is adapted to be laid upon the burner 6 and will operate to produce admixture with the air and baffling of the flame, practically all of the products of combustion passing upwardly and outwardly through the central aperture 10 and being delivered against the bottom of the article to be heated, the flame radiating in the form of an inverted cone, as indicated in the drawings. The same advantages accrue from such construction, and if desired the coping 9 may be provided with a plurality

of slits or openings 13 as indicated in Fig. 6, through which portions of the flame will pass.

It will be understood that the device may be set upon the burner 6 underneath the opening of a stove, as indicated in Fig. 1, the vessel to be heated being supported on the top of the stove in the usual manner, above the burner, or that the vessel may be set directly on the top of my improved device. In the latter way of using it, the bottom of the vessel is thus supported a considerable distance above the jet openings of the burner 6 while ample intervening space is provided to insure complete combustion and radiation of the gases. When thus used, the objections of setting the vessel immediately upon the ordinary burner and against the jet openings, (as is commonly done with such gas burners) are entirely overcome and the full efficiency of the fuel is developed.

It will be understood that the invention may be variously modified in construction or arrangement as to the framework, the form or shape of the frame, and the resulting distribution of the attached asbestos, the operation in all cases being substantially the same as I have described.

I have found in use that the device results in an appreciably higher degree of heat with a less amount of gas than is required when the burner 6 alone is used, resulting in great economy in fuel, and the device itself will be found to have the advantages claimed, while being extremely simple and cheap in construction and of an enduring indestructible nature.

Having described my invention, what I claim is:

1. A flame baffling device for gas burners consisting of a disk-like supporting frame having vertically disposed radially arranged arms and intervening gas circulation apertures, and provided with a covering of asbestos, substantially as set forth.

2. A flame baffling device for gas burners consisting of a disk-like supporting frame having vertically disposed radially arranged arms and intervening gas circulation apertures, said arms being so arranged as to provide a central transverse aperture, said framework having a covering of asbestos, substantially as set forth.

3. A flame baffling device for gas burners consisting of a disk-like supporting frame composed of vertically disposed radially arranged metallic arms so incorporated with each other as to provide a substantially flat framework with numerous transverse apertures, the arms of said framework having coverings of asbestos fiber, substantially as set forth.

4. A flame baffling device for gas burners consisting of a circular framework of asbestos having a central apertured coping, radially arranged arms incorporated therewith, and a covering of asbestos fiber, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

JULIUS SCHIRRA.

Witnesses:
C. M. CLARKE,
CHAS. S. LEPLEY.