April 15, 1924. 1,490,557

J. S. BRENNAN

COMBINATION DEFLECTOR AND STOVE GRID

Filed Oct. 30, 1923

Fig. 1

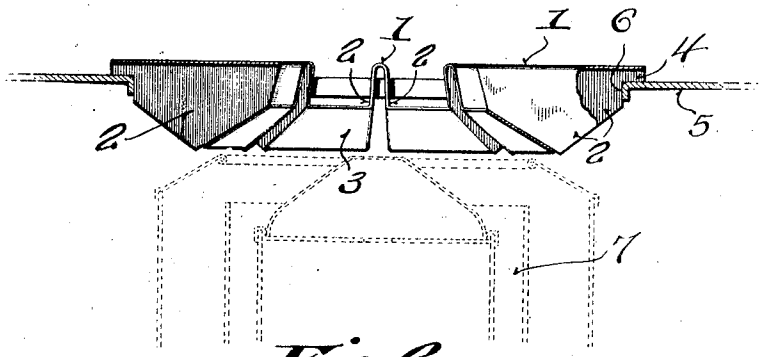


Fig. 2

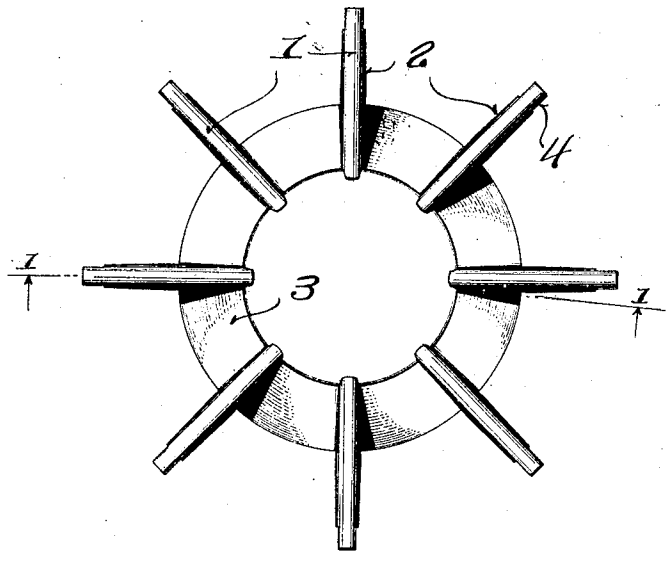
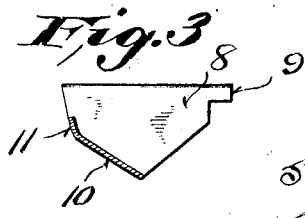


Fig. 3



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UNITED STATES PATENT OFFICE.

JOHN S. BRENNAN, OF MIAMI, FLORIDA.

COMBINATION DEFLECTOR AND STOVE GRID.

Application filed October 30, 1923. Serial No. 671,800.

To all whom it may concern:

Be it known that I, JOHN S. BRENNAN, a citizen of the United States, and resident of Miami, in the county of Dade and State of Florida, have invented certain new and useful Improvements in Combination Deflectors and Stove Grids; and I do hereby declare that the following is a full, clear, and exact description thereof.

This invention relates to a combined deflector and stove grid.

Objects of this invention are to provide a combined deflector and stove grid formed of metal, to provide a construction which is strong and rigid, which does not obstruct the free flow of products of combustion, in which the grid arms themselves provide channels for the products of combustion, and in which a deflecting metal ring joins the arms, braces them, and is integrally formed therewith.

Embodiments of the invention are shown in the accompanying drawings, in which:—

Figure 1 is a sectional elevation through the device, such view corresponding to a section on the line 1—1 of Figure 2.

Figure 2 is a plan view of the structure shown in Figure 1.

Figure 3 is a fragmentary section of a modified form of the invention.

The device comprises a series of radially extending arms 1 which are formed with rounded upper portions and with parallel vertical walls 2 extending downwardly therefrom. The lower edges of these vertical walls are slanting, as illustrated in Figure 1 and the lower edges of opposed walls of adjacent arms are each joined by a downwardly and outwardly slanting annular member 3. These annular members, as will be seen from Figure 2, form a deflector ring which slants downwardly and outwardly. It is to be noted that the entire device is preferably formed from a single integral piece of sheet metal and is stamped or pressed into shape from such single piece.

Referring further to Figure 1, it will be seen that the arms 1 are provided with outwardly projecting shoulder portions 4 which engage the stove top 5 and support the device,—the shoulders 6 of such portions correctly centering the combined grid and deflector with reference to the opening in the stove top. The outwardly and downwardly slanting ring formed of the members 3, it will be noted from Figure 1, is spaced above the open portion or flame projecting space 7 of the burner shown in dotted lines in Figure 1 and this deflector portion serves to deflect any overflowing liquid and to conduct it outwardly beyond the active portion of the burner so as to prevent extinguishing of the flame.

It is to be noted from reference to Figure 1 that the arms 1 are of very rigid construction due to their shape and that they are adequately braced due to the deflector portions 3. It is further to be noted from reference to Figure 1 that the arms themselves form open channels for conducting the products of combustion and do not obstruct the free flow of the products of combustion but serve to distribute such products.

In the modified form of the invention, as shown in the fragmentary view Figure 3, the combined grid and deflector are formed preferably by casting. This form of the invention employs a plurality of radially extending ribs or arms 8 which have outwardly projecting shoulder portions 9 adapted to rest upon the stove top and correctly center the device as in the first form.

A deflector plate 10 is formed integrally with the ribs and is carried by one of the lower slanting faces of such ribs as in the first described form. This deflector plate is provided with an upturned inner flange 11 adapted to aid in catching any overflowing liquid and in preventing any spraying or splashing of the liquid inwardly of the deflector plate.

Obviously the first form of the invention might also embody this upturned lip if desired.

It will thus be seen that a strong and simple type of combined grid and deflector has been provided and that the construction is such that the device is simple in construction, thus greatly reducing the cost and providing at the same time a rugged and effective structure.

Although a few forms of the invention have been described in considerable detail, it is to be understood that the invention may be variously embodied and is therefore to be limited only as claimed.

I claim:

1. A combined overflow deflector and stove grid comprising a series of radial arms having outer projections adapted to rest upon a stove top, and a downwardly and outwardly extending ring carried by the lower portion of such arms and adapted to deflect overflowing liquid away from the burner.

2. A combined overflow deflector and stove grid comprising a series of radial arms having outer projections adapted to rest upon a stove top, and a downwardly and outwardly extending ring carried by the lower portion of said arms and adapted to deflect overflowing liquid away from the burner, said arms and ring being formed from a single integral piece of metal.

3. A sheet metal combined deflector and stove grid comprising a series of arms formed of folded sheet metal and joined adjacent their lower ends by integral outwardly slanting portions, said slanting portions forming an annular deflector.

4. A sheet metal combined deflector and stove grid comprising a series of radial arms having outwardly projecting portions adapted to rest upon a stove top, said arms each comprising a rounded upper portion and spaced vertical walls, and an outwardly and downwardly slanting ring carried by the lower ends of said walls and comprising a series of annular portions integrally joining opposed walls of adjacent arms.

5. A device adapted to be positioned within the opening of a stove top above a burner, said device comprising a combined grid and deflector plate and having a plurality of radially extending lips whose outer ends are shouldered and are adapted to rest upon the stove top and to correctly center said device, and a deflector plate integral with said ribs and carried by the lower portion of such ribs, said deflector plate slanting downwardly and outwardly.

6. A device adapted to be positioned within the opening of a stove top above a burner, said device comprising a combined grid and deflector plate and having a plurality of radially extending ribs whose outer ends are shouldered and are adapted to rest upon the stove top and to correctly center said device, and a deflector plate integral with said ribs and carried by the lower portion of such ribs, said deflector plate slanting downwardly and outwardly and having an inner upturned flange.

In testimony that I claim the foregoing I have hereunto set my hand at Milwaukee, in the county of Milwaukee and State of Wisconsin.

JOHN S. BRENNAN.