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J. Z. HARNER ET AL

TOP GRATE FOR GAS STOVES

Filed March 3, 1928

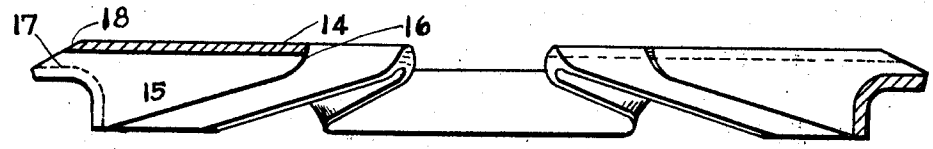

Fig 3

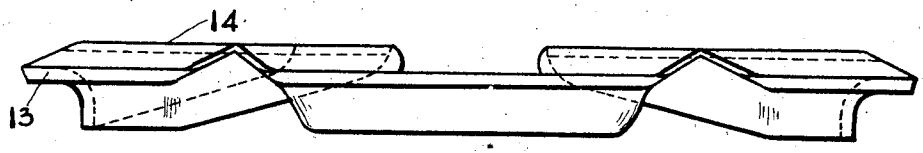

Fig. 2

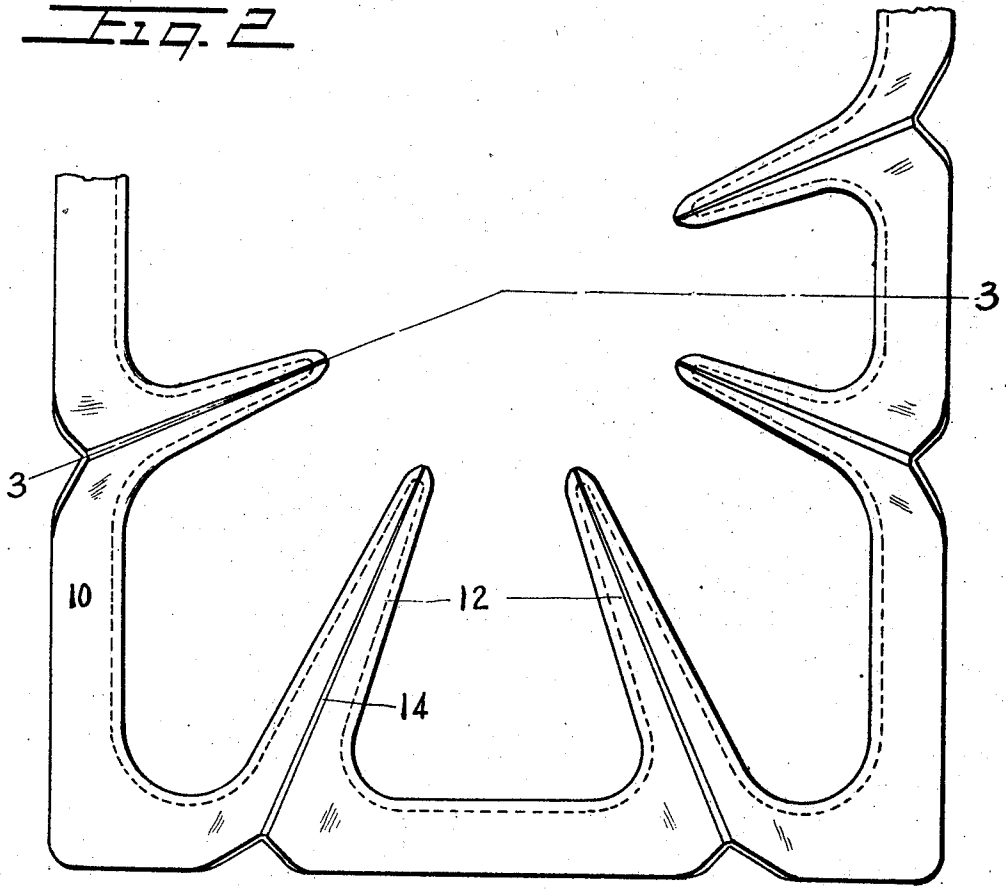

Fig. 1

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UNITED STATES PATENT OFFICE.

JOHN Z. HARNER AND HARRISON S. SCHWEINHART, OF BOYERTOWN, PENNSYLVANIA, ASSIGNORS TO THE UNION MANUFACTURING COMPANY, OF BOYERTOWN, PENNSYLVANIA, A CORPORATION OF PENNSYLVANIA.

TOP GRATE FOR GAS STOVES.

Application filed March 3, 1928. Serial No. 258,986.

Our invention relates to gas stoves and particularly to open top grates therefor of the ordinary type comprising rectangularly united frame bars provided with inwardly extending utensil-supporting arms; our invention consisting in providing an improved construction adapted particularly to provide for better escape of unconsumed products of combustion which are ordinarily retained between the burner and the utensil-supporting grate. The invention is fully described in connection with the accompanying drawings and is clearly defined in the subjoined claim.

Fig. 1 is a partial plan view of a top grate embodying the invention; Fig. 2 is an end-edge view of same; and Fig. 3 is a cross-sectional view on the line 2—2 of Fig. 1.

The top grate illustrated is a single casting as usual, comprising parallel frame bars 10, 10 and 11, 11 respectively, each provided with arms 12, 12 extending convergingly toward the center of the open rectangle so as to form symmetrically arranged utensil supports; the horizontal flanges 13 of each angle-shaped frame bar being adapted to rest upon the edges of a top-plate opening directly above the burner.

The inwardly extending arms 12 are commonly arranged with their utensil supporting surfaces 14 raised to a level slightly above that of the frame bars 10, 11, so as to permit of egress between the arms for the unconsumed products of combustion. Such egress, however, is necessarily limited by the need of keeping the supported utensils properly close to the burner, and with large size utensils especially it is apt to be unduly restricted.

With a view to giving freer egress to these products of combustion, below the supporting surface 14 of the grate, while maintaining this supporting level properly close to the burner, we have provided a grate structure which is itself adapted to provide sufficient egress to substantially avoid any restriction due to the necessary use of utensil supporting means.

To this end we so form each of the inwardly extending arms 14 as to provide an underneath passage-way 15 extending from its reduced inner end 16 to a free discharge opening 17 at its intersection with the corresponding frame bar 10 or 11; the cross-section of the arm at all points of its length being of approximately inverted V-shape, and the portion thereof which is above the frame bar having a beveled overlying end 18 which provides a discharge opening or fume vent 17 at the intersection, communicating not only with the passage-way 15 of the arm but also with the space below the frame bar; both the horizontal and vertical members of the angle-iron cross-section of the latter being turned into the planes of the V-shaped arm, so as to provide free discharge for fumes collecting under both the arms and the bars. It will be readily seen that the egress thus provided at each intersection of the arms and bars insures egress for fumes which would be otherwise confined by the grate.

What we claim is:

An integrally formed open top grate for gas stoves consisting of rectangularly arranged frame bars of substantially angle-iron cross-section, having utensil supporting arms of inverted V cross-section converging inwardly therefrom; the communicating top portion of each of said arms being at a higher level than the frame bars and having a beveled-end overlying portion arranged to provide a fume-vent for both the bar and arm at each intersection.

In testimony whereof we affix our signatures.

JOHN Z. HARNER.
HARRISON S. SCHWEINHART.