May 5, 1925.

1,536,590

H. KIELBERG

BURNER FOR GAS HEATERS

Filed April 13, 1923

FIG 1

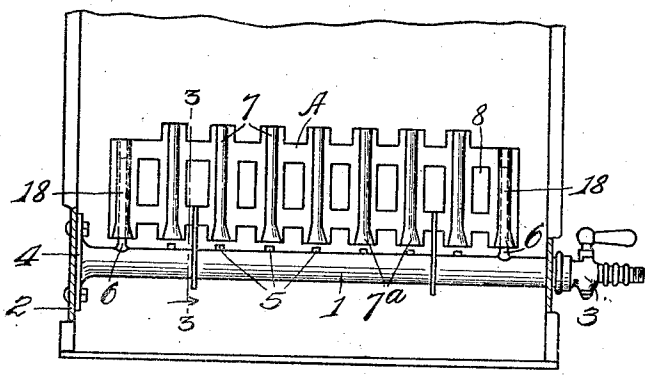


FIG 2

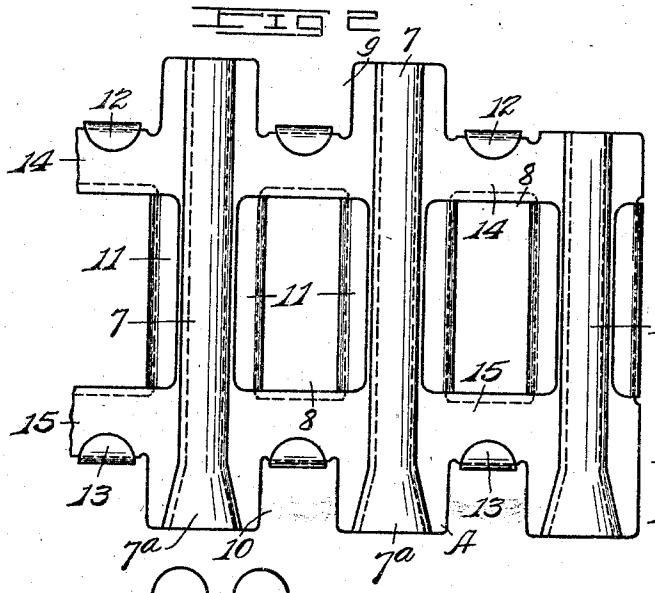


FIG 3

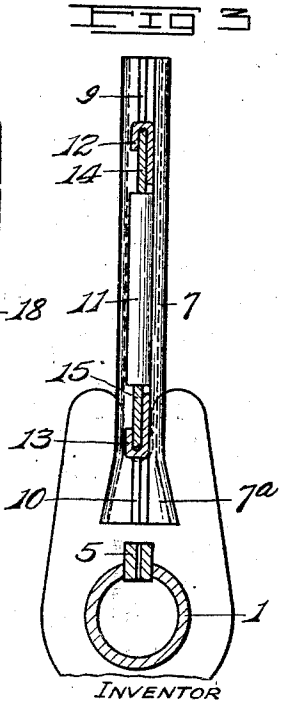
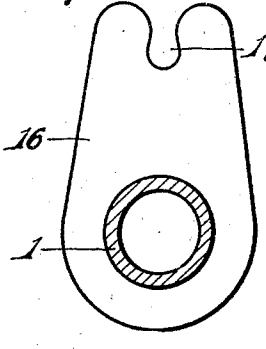


FIG 4



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Patented May 5, 1925. 1,536,590

UNITED STATES PATENT OFFICE.

HENRY KIELBERG, OF MARTINS FERRY, OHIO, ASSIGNOR TO WHITAKER-GLESSNER COMPANY, OF WHEELING, WEST VIRGINIA, A CORPORATION OF WEST VIRGINIA.

BURNER FOR GAS HEATERS.

Application filed April 13, 1923. Serial No. 631,750.

To all whom it may concern:

Be it known that I, HENRY KIELBERG, a citizen of the United States of America, and resident of Martins Ferry, county of Belmont, and State of Ohio, have invented certain new and useful Improvements in Burners for Gas Heaters, of which the following is a specification.

This invention relates broadly to gas burners, and more specifically to a burner for gas heating stoves.

The primary object of the invention is to provide a burner for gas heaters which has a simple and relatively inexpensive construction and which is highly efficient in operation.

A further object is to provide a burner of Bunsen type embodying a plurality of connected Bunsen burner tubes formed wholly of two complementally arranged and attached sheet metal stampings.

With these and other important objects in view, the invention resides in the features of construction, arrangement of parts and combinations of elements which will hereinafter be fully described, reference being had to the accompanying drawings, in which—

Figure 1 is a front elevation of the invention, illustrating its application to a heater casing;

Figure 2 is an enlarged rear face view of an end portion of the Bunsen burner;

Figure 3 is an enlarged section on line 3—3, Fig. 1; and—

Figure 4 is a similar section of the gas supply tube.

Referring to said drawings, 1 indicates a tubular gas supply tube mounted horizontally within the lower part of a stove or heater casing 2 and to which gas is admitted from a supply line in the usual manner. As herein shown, said supply tube carries a valve 3 of common form on its inlet end and has its opposite end closed by a welded-on plate 4 which is attached to the adjacent wall of the casing 2.

Disposed in alined relation in the top of the supply tube 1 is a plurality of discharge orifices, herein shown as having nipple-like nozzles or jets mounted therein, through which gas issues in an upward direction; and rigidly mounted upon said tube 1 at points spaced from the endmost of said jets a distance corresponding to that between jets are upright posts 6.

Superposed over each of the various jets 5 is the lower bell-shaped end 7ª of a burner tube 7 of Bunsen type. Said tubes 7 are arranged in a connected series, being formed in and constituting parts of a burner element, designated generally by the letter A and composed of two sheet metal plates which are attached together in face-to-face complemental relation. Each of said plates is blanked and die shaped to form troughs, semi-cylindrical in cross section, which, when said plates are fitted together, complement those of the opposite plate for forming said tubes 7. The flat panels located between and connecting the troughs of one of said plates have formed therein centrally located substantially rectangular openings 8, and provided in the upper and lower edges of said panels are recesses 9 and 10, respectively, herein shown as substantially rectangular in form. Each of the panels of the other plate has struck up therefrom a pair of tongues 11 which are projected through the opening 8 of the confronting panel of the opposite plate and which are turned laterally in opposite directions into clamping engagement with the vertical portions of the confronting panel marginal to said opening. The said other plate has the upper and lower edges of its panels recessed to correspond with the recesses 9 and 10 of the confronting plate, except that there remain short tongues 12 and 13 which are bendable downwardly and upwardly, respectively, into clamping relation to the adjacent upper and lower cross webs 14 and 15 remaining following the provision of the openings 8 and the recesses 9 and 10.

The above described burner element A is supported at a suitable elevation over the supply tube 1 by means of a plurality of plate-like supports 16 which are disposed transversely at suitable points and in stationary positions upon said tube, said supports having in the upper portions thereof recesses 17 forming seats for the reception of lower edges of certain of the paneled portions of said burner element.

The upright posts 6 of the supply tube are received by upright sleeves 18 provided adjacent to the opposite ends of the burner element A, said sleeves being identical with the burner tubes 7 except that they may be reduced somewhat in length by shearing off their upper ends at or adjacent to the level

of the upper edge of the upper cross web 14, as shown. The posts so interengaged with the sleeves 18 serve to securely maintain the burner element A in upright position and to prevent shifting movement of said element.

The plates of which the burner element A is composed obviously may be formed in long strips and cut to length—that is, cut to suit any width of heater casing in which they are to be used, thus obviating the necessity for providing a set of dies for each of the various lengths of plates which may be required in different sizes of stoves or heaters.

What is claimed is—

In a gas heater, the combination with a heater casing, of a gas supply tube disposed horizontally within said casing, relatively spaced nozzles carried by said tube, upright posts carried by said tube adjacent to its opposite ends, supporting members carried by said tube intermediate said posts and a burner element superposed upon said supporting members and having engagement with said posts, said element comprising companion sheet metal plates attached together in face-to-face relation and shaped to form complementally a plurality of relatively spaced Bunsen burner tubes and post-receiving sleeves.

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

HENRY KIELBERG.

Witnesses:
G. O. SMITH,
H. E. DUNLAP.