

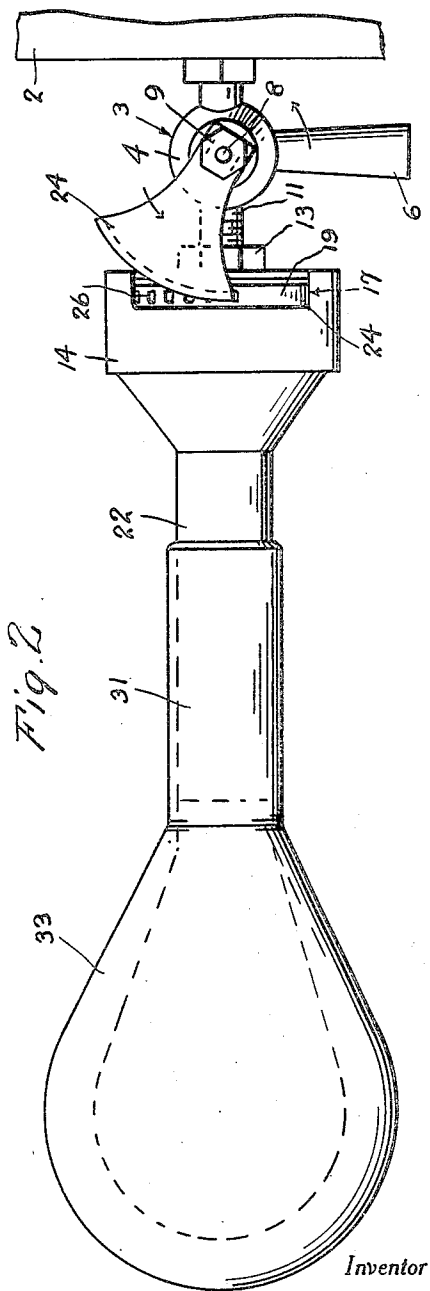
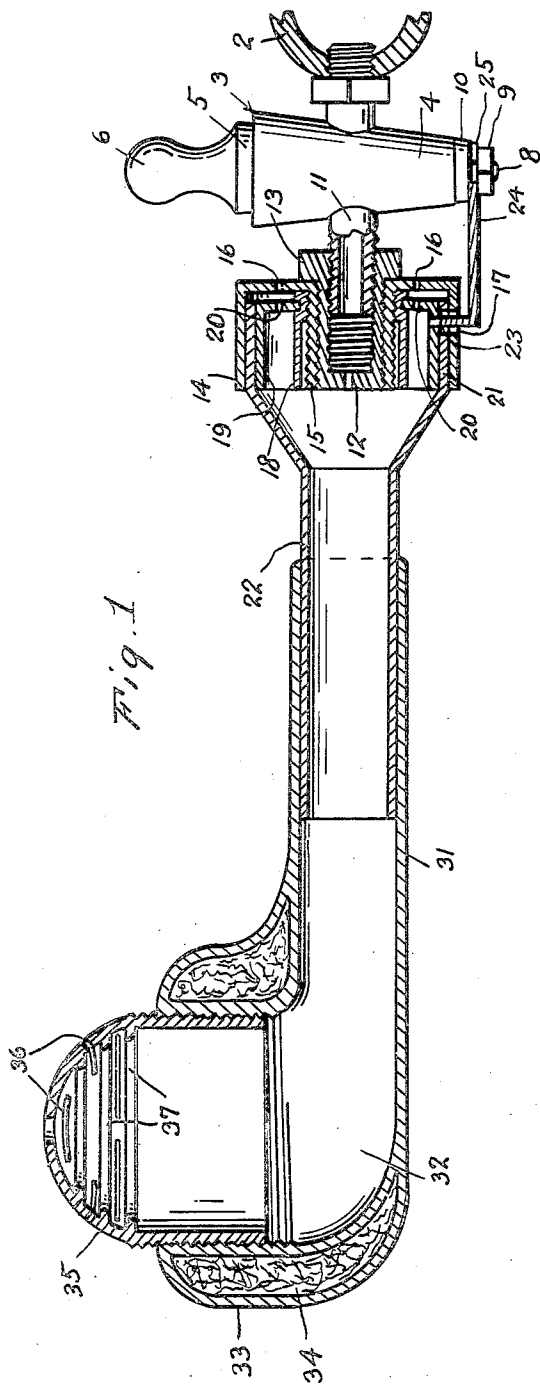
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J. PAULUCCI

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GAS BURNER

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GAS BURNER

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1 Claim. (Cl. 158—116)

The present invention relates to new and useful improvements in gas burners for use particularly in ranges and water heaters but it will be understood, of course, that a burner in accordance with the present invention may be used for any purpose for which it may be found adapted.

The primary object of the present invention is to provide, in a manner as hereinafter set forth, a burner of the aforementioned character embodying a novel construction, combination and arrangement of parts through the medium of which operation at maximum efficiency and economy at all times will be assured.

Other objects of the invention are to provide a gas burner of the character described which will be simple in construction, strong, durable, reliable, attractive in appearance and which may be manufactured at low cost.

All of the foregoing and still further objects and advantages of the invention will become apparent from a study of the following specification, taken in connection with the accompanying drawing wherein like characters of reference designate corresponding parts throughout the several views, and wherein:

Figure 1 is a view in vertical longitudinal section through a burner constructed in accordance with the present invention.

Figure 2 is a view in bottom plan of the burner. Referring now to the drawing in detail, it will be seen that the reference numeral 3 designates generally a gas cock, said gas cock being connected to a supply pipe 2 in the usual manner and including a tapered casing 4 in which a core 5 is rotatable, said core 5 being provided with an operating handle 6, as usual. Projecting from the lower end of the core 5 is a threaded shank 8 which receives a retaining nut 9. The reference numeral 10 designates a washer which is mounted on the lower portion of the core 5 in engagement with the lower end of the casing 4.

Projecting from the casing 4 is an externally threaded nipple 11 upon which a nozzle 12 is threadedly mounted, said nozzle 12 being internally and externally threaded and including a polygonal head 13 on its inner end.

Threadedly mounted on the nozzle 13 is an outer shutter 14, said shutter 14 being substantially cup-shaped and including a centrally located internally and externally threaded neck 15 which receives the nozzle 12. The base or end portion of the outer shutter 14 is provided with air inlet openings 16 and the flange or skirt portion of said shutter 14 is provided with a circumferen-

tially extending opening 17, the purpose of which will be presently set forth.

Threadedly mounted on the neck 15 of the outer shutter 14 is a sleeve 18 upon which an inner shutter 19 is rotatably mounted in inwardly spaced, concentric relation to the annular portion of the outer shutter 14. The inner shutter 19 has formed therein air inlet perforations or openings 20 for the passage of air which enters through the openings 16, as will be apparent.

The spaced, concentric outer and inner shutters 14 and 19 receive therebetween the enlarged end portion 21 of a tube 22. The enlarged end portion 21 of the tube 22 has formed therein a circumferential slot 23 which communicates with the opening 17 in the outer shutter 14. The reference numeral 24 designates a toothed segment which is operable in the opening 17 and the slot 23, said segment including bifurcations 25 at one end which straddle the lower portion of the core 5. The segment 24 is removably secured on the core 5 for rotation therewith by the retaining nut 9. The inner shutter 19 has formed therein a circumferential series of openings or perforations 26 which receive the teeth of the segment 24.

It will thus be seen that when the cock 3 is actuated, the inner shutter 19 will be rotated.

Telescopically mounted for longitudinal adjustment on the tube 22 is an elbow 31 having an enlarged, upturned free end portion providing a chamber 32. The enlarged end portion of the elbow 31 is designated by the reference numeral 33, said enlarged end portion 33 being hollow and packed with a suitable heat insulating material 34, preferably asbestos.

Threadedly mounted for vertical adjustment in the upturned, enlarged end portion 33 of the elbow 31 is a substantially dome-shaped tip 35. The tip 35 has formed therein gas outlet openings or slots 36 which are arranged substantially as shown in Figure 1 of the drawings. The tip 35 has formed integrally therein adjacent the openings 36 a plurality of baffles 37.

Briefly, the operation of the burner is as follows: When the cock 3 is opened, gas from the pipe 2 passes therethrough and is discharged from the nozzle 12 into the tube 22. Simultaneously with the opening of the cock 3, the inner shutter 19 is rotated by the segment 24 to control or regulate the air entering the burner. It will thus be seen that as the cock 3 is opened to increase the volume of gas, the volume of air which will be permitted to be drawn into the burner will be proportionately increased. The air is drawn inwardly from the atmosphere by the

action of the gas rushing into the tube 22 from the nozzle 12, as will be understood.

The construction and arrangement of the burner is such that an intense, concentrated flame is produced beneath the bottom of the cooking utensil which will not be extinguished should boiling over occur. This constitutes a highly desirable feature of the invention.

It is believed that the many advantages of a gas burner constructed in accordance with the present invention will be readily understood, and although the preferred embodiment of the invention is as illustrated and described, it is to be understood that changes in the details of construction and in the combination and arrangement of parts may be resorted to which will fall within the scope of the invention as claimed.

What is claimed is:

A gas burner comprising a tube, means at one end of the tube for controlling the entrance of fuel thereinto, an elbow slidably mounted on the tube and including an enlarged, upturned free end portion, said enlarged free end portion having a chamber therein, heat insulating material in the chamber, and a tip threadedly mounted for vertical adjustment in the enlarged free end portion of the elbow, said tip being substantially dome-shaped and having a plurality of outlet passages therein, and circumferential baffles in the tip adjacent the outlet passages.

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