No. 826,967. PATENTED JULY 24, 1906.

H. SCHNEIDER.

GASEOUS FUEL BURNER.

APPLICATION FILED NOV. 7, 1905.

Fig. 1.

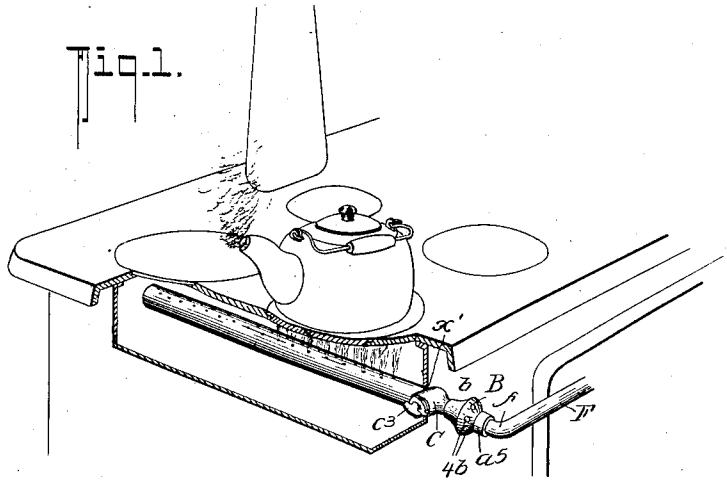


Fig. 2.

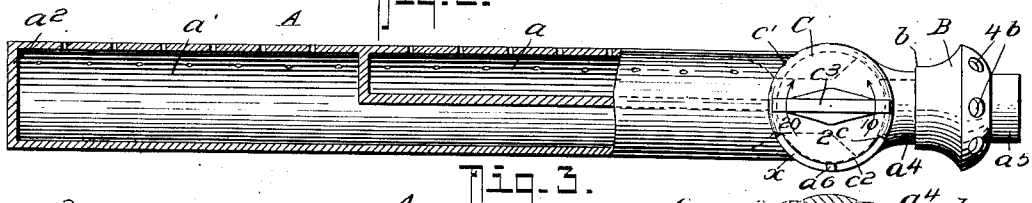


Fig. 3.

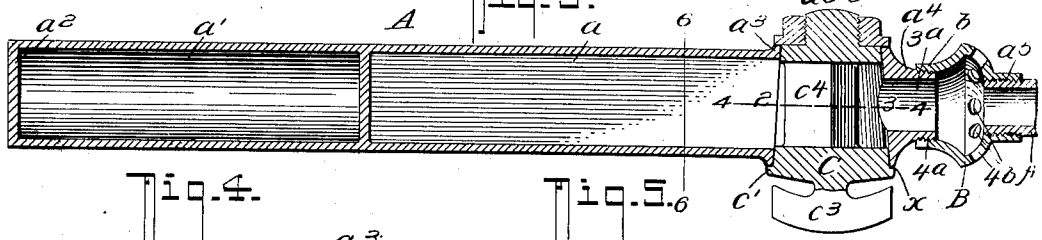


Fig. 4.

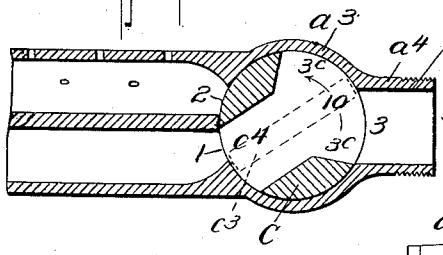


Fig. 5.

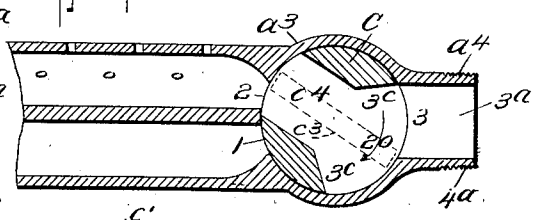


Fig. 6.

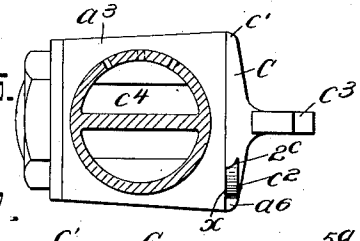
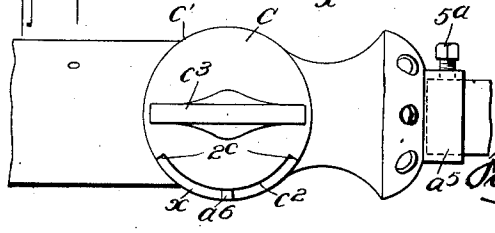


Fig. 7.



WITNESSES:

F. C. Gibson.

John T. Schrott.

INVENTOR

Henery Schneider.

BY

Fred G. Peterson & Co

ATTORNEYS

UNITED STATES PATENT OFFICE.

HENERY SCHNEIDER, OF KENTON, OHIO.

GASEOUS-FUEL BURNER.

No. 826,967. Specification of Letters Patent. Patented July 24, 1906.

Application filed November 7, 1905. Serial No. 286,307.

To all whom it may concern:

Be it known that I, HENERY SCHNEIDER, residing at Kenton, in the county of Hardin and State of Ohio, have invented certain new and useful Improvements in Gaseous-Fuel Burners, of which the following is a specification.

My invention relates to improvements in that type of gaseous-fuel burners more especially designed for use in the ordinary makes of cook-stoves and ranges; and it primarily has for its object to provide a burner of the character stated of a simple and economical construction which can be easily applied to ordinary cook-stoves or ranges without disorganizing the construction thereof and which can be readily adjusted to suit the desired fuel consumption and heating qualities.

In its generic nature my invention comprehends a burner comprising a body portion of tubular or pipe-like shape having a plurality of cored-out mixing-chambers arranged to form a main compartment which is used when a maximum heat for the burner is required and a supplemental compartment cooperatively arranged with the main compartment whereby to form, as it were, under one adjustment of the valve-pipes that constitute a part of my complete burner a continuation or part of the main burner and under another adjustment of the valve devices to form an independent or jet burner for keeping up a minimum flame.

In its more subordinate features my invention consists in certain details of construction and peculiar combination of parts, all of which will be first described in detail and then be specifically pointed out in the appended claims, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view of my invention as applied to so much of a cooking-stove necessary to illustrate its practical application. Fig. 2 is a longitudinal section of the burner, showing the preferred manner of connecting the mixer-cap and the feed-pipe. Fig. 3 is a horizontal section thereof. Fig. 4 is a detail section on the line 4 4 of Fig. 3, illustrating the adjustment of the valve for feeding into the main combustion compartment of the burner and closing off the supplemental compartment. Fig. 5 is a similar view showing the valve shifted to close off the main compartment and open up the feed to the supplemental compartment. Fig. 6 is a transverse section on the line 6 6 of Fig. 3. Fig. 7 is a detail view illustrating a modified manner of connecting the mixer-cap and the feed-pipe.

In the practical construction my invention comprises a tubular body A, having two compartments or cored-out sections, one of which, a, is about one-half the diameter of the body A and extends about half its length, while the other, a', extends approximately the full length of the body A and at the front end surrounds the casing of the other chamber a, which at the inner end is closed off from the chamber a' by a solid head a^2.

At the outer end the body A has an integral extension, which is cored out at right angles to the longitudinal cores a a' to form a valve-chamber a^3, which has an inlet 3^a, that communicates with the extension a^4, having an external thread 4^a to receive a detachable mixer-cap B, which has a threaded boss b to engage the extension a^4, a series of air-inlets 4^b, and an extension a^5 threaded to receive the threaded end f of the gas-feed pipe F, as clearly shown in Fig. 3.

In Fig. 7 is shown a slightly-modified arrangement of the mixer end of the burner. In this latter form the extension has the mixer-head integrally formed therewith and the said head has its extension a^5 provided with a set-screw 5^a to clamp against the feed-pipe, as shown in Fig. 6 aforesaid.

Within the valve-chamber is mounted a tapering valve C, the lower end of which is detachably connected with the lower end of the valve-casing, while its upper end has an annular flange c', that rides on the top edge x of the valve-casing, which flange at one side has a segmental cut-out portion c^2, the opposite edges 2^c of which are arranged to alternately move into engagement with a stop-lug a^6 on the valve-casing for a purpose presently explained, and the top of the valve has a suitable thumb and finger piece c^3, as shown.

The body of the valve C has a transverse bore c^4 of a diameter sufficiently large to be in direct communication with the inlets 1 and 2 of the main and supplemental combustion-chambers a a' when the said valve C is adjusted to its central position, as shown in Fig. 2, and the front portion of the bore c^4 is widened laterally, as at 3^c 3^c, whereby to maintain an open communication with the inlet-port 3 in the valve-casing during all of the adjustments of the valve C.

The shape of the valve-bore c^4 and the cor-

relative arrangement therewith of the several ports or openings 1, 2, and 3 in the valve-casing is such that by turning the valve in the direction indicated by the arrow 10 in Fig. 4 until the edge c^2 engages the stop-lug a^6, which limits the adjustment of the valve C in the direction indicated, the opening 2 to the supplemental chamber a' will be closed, while the ports 1 and 3 remain open to lead the mixed air and gas into the main compartments a only, and when the valve C is shifted into position, as indicated by the arrow 20, the feed-opening 1 to the main compartment will be closed off and the air and gas will be now fed to the supplemental compartment or burner a' only, it being understood that under either adjustment of the valve C, as stated, the said valve need not be turned to the limit of its movement, but can be held partly open to regulate the amount of fuel-supply to either compartment a a', as may be desired.

By arranging the supplemental and main combustion or burner compartments a a' in the manner stated it will be noticed that the jet or burner openings for the main burner are continued the full length of the tubular body, and by reason of the supplemental burner a' being almost entirely within the main burner the upper or crown portion thereof is formed by the continuation of the upper or crown portion of the main burner.

My construction of burner, it will be noticed, can be readily fitted within the fire-box of an ordinary cook-stove or range by simply forming an aperture x' in the front end of the said fire-box sufficiently large for the passage of the burner-body A, which can be readily made fast to the feed-pipe by threading onto the pipe or clamping the same by the clamping-nut when the modified construction shown in Fig. 7 is employed.

By arranging the supplemental compartment or burner a' in the manner shown and described a great saving of fuel is effected, since when using but one of the stove-holes, as shown in Fig. 1, only that part of the burner directly under the said hole is used and the flames directed against the pot or utensil over the one hole.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. An improved gaseous-fuel burner consisting of a body portion having two longitudinal independent chambers, one of which is of less length and area than the other, each having burner-holes that discharge through the body, a valve-casing that forms a part of the body, said casing having discharges at one side in line with the entrant end of the two chambers, and an inlet at the other side in communication with the feed-pipe, a stop on said casing and a valve rotatably mounted in the casing having a single cross-port arranged to continuously communicate with the feed-inlet and to alternately cut out either of the chambers or to lead into both chambers at the same time, said valve having stop portions adapted to engage the stop on the casing for the purposes described.

2. The hereinbefore-described improved gaseous-fuel burner, which consists of a tubular body, closed at its outer end having burner-openings in its top and having a short supplemental chamber at its forward end under the fire-openings, a valve-casing that forms an integral part of the body, said casing having discharge-openings at one side that communicate with the main and supplemental chambers in the body, and an inlet-port at the opposite side, the said opposite side having a tubular extension, an air-mixer secured to such extension having means for detachably supporting the discharge end of the feed-pipe and a valve within the casing having a single cross-port arranged whereby under one adjustment of the valve, both chambers in the body will be in open communication with the feed-port, under another adjustment one of said chambers will be closed off and under another adjustment of said valve, the other chamber will be closed off for the purposes specified.

HENERY SCHNEIDER.

Witnesses:
JOHN R. WILSON,
MARTIN GEBERT.