

C. H. WERLIN.
GAS BURNER.

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1,320,108.

Patented Oct. 28, 1919.

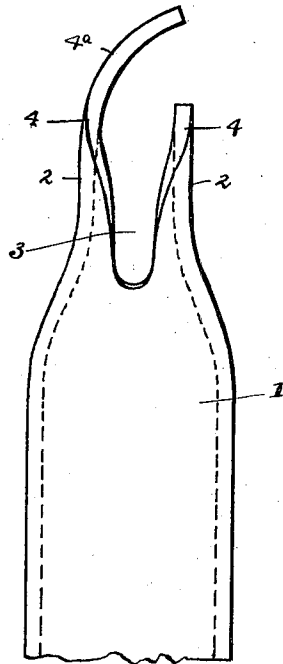


Fig. 1

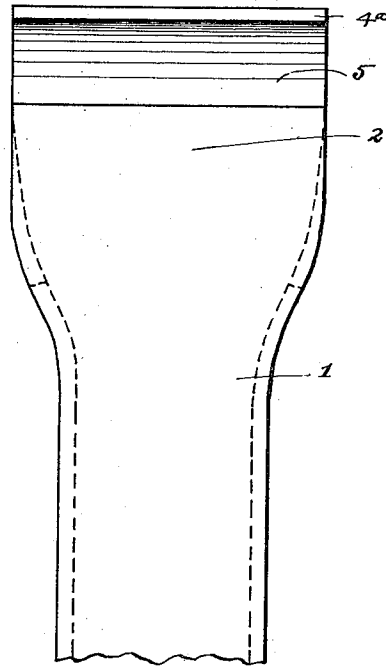


Fig. 2

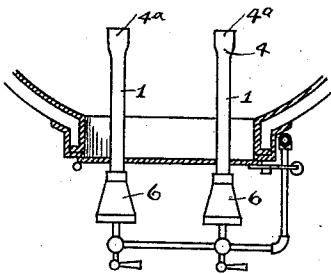


Fig. 3

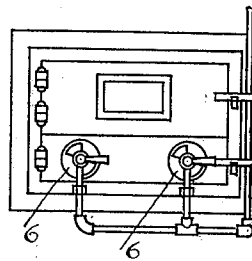


Fig. 4

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GAS-BURNER.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, CHARLES H. WERLIN, a citizen of the United States, residing at Columbus, in the county of Franklin and State of Ohio, have invented certain new and useful Improvements in Gas-Burners, of which the following is a specification.

This invention relates to gas burners of that class which are adapted to be used in furnaces, stoves or other similar heating appliances and has particular relation to gas burners where gas is adapted to be used in conjunction with coal or other fuel. The objects of my invention are to provide an improved burner of this class formed integral with a gas conducting pipe and so shaped and constructed as to cause the gas flame to not only be reflected in one direction but to result in the spreading of the flame and obtaining a maximum heat therefrom.

The preferred embodiment of my invention is shown in the accompanying sheet of drawing wherein similar characters of reference designate corresponding parts and wherein,

Figure 1 is a view in elevation of my improved burner,

Fig. 2 is a similar view at right angles with that shown in Fig. 1,

Fig. 3 is a transverse section through a furnace door showing two of my improved burners applied to the furnace, and

Fig. 4 is a front elevation of a furnace door to which said burners are applied.

Referring to the drawing 1 represents a section of ordinary gas conducting pipe. The outer open end portion of this gas pipe section serves to form the burner and opposing sides of this pipe end are as shown pressed toward each other to the substantially flattened form shown at 2. By thus flattening or compressing the outer end portion of the pipe section it will be understood that the broad or center passage of the pipe is converted from a round to a substantially oblong passage. The flattened neck portion of the pipe formed by the depressing of the sides 2 is provided on those sides which are at right angles with the flattened portions with central longitudinal recesses 3 which gradually decrease in width toward their inner ends resulting in the formation of opposing lip terminations 4. The terminate portion of the burner head formed as

described has one of its flattened sides cut away so that one of the lips 4 which extends in the direction of the length of the pipe is comparatively short while the remaining lip 4^a is bent or curved until its outer end is at a distance from but substantially opposite the end of the shorter lip 4 thus providing a substantially horizontal oblong mouth 5 between said lips, said mouth being at its extremities in communication with the recesses 3 heretofore described.

While it will be obvious that gas burners such as I have described may be utilized in various ways in connection with heating appliances, I have shown in Fig. 3 of the drawing a sectional view of a furnace door through which are projected two of my improved burners in position for use. In the positions in which these burners are shown it will be understood that the gas which passes from a source of supply through the mixers 6 will when ignited cause the directing of the gas flames downward. This is particularly desirable where it is designed to direct the flame from the burner onto coal or other fuel which may be contained in the fire box of the furnace or other heating apparatus. This reflection of the gas flame is as will readily be understood due to the position of the elongated lip 4^a of the burner head and it will further be understood that the flattening of the gas passage and its outlet in conjunction with the side openings or recesses 3 will cause the flame to spread laterally thus providing a comparatively wide and thin flame, the effectiveness of which is increased by the contraction of the burner passage.

It will be obvious that burners of the character herein described may be so positioned as to direct the flame against a side wall of a heating apparatus or in any desirable direction and that any number of such burners may be utilized at a time.

What I claim is:

1. A gas burner comprising a gas conducting pipe, one end of said pipe being flattened to assume an oblong contour so that the said oblong portion is located centrally across the open end of the pipe, the upper lip of the flattened portion being extended and bent over the open oblong portion and terminating at the level of the lower lip.

2. A gas burner comprising a gas conducting pipe, one end of said pipe being flat-

tened to assume an oblong shape so that said oblong portion is located centrally across the open end of the pipe, an oval shaped portion having oppositely located recesses
5 extending longitudinally throughout the length of the sides of the oval portion and gradually decreasing in width toward the

rear of the pipe, the upper lip of the flattened portion being extended and bent over the open oblong portion and terminating at 10 the level of the lower lip.

In testimony whereof I affix my signature.

CHARLES H. WERLIN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."