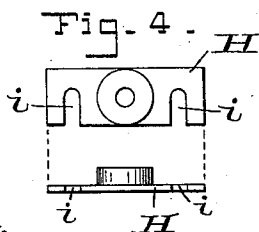
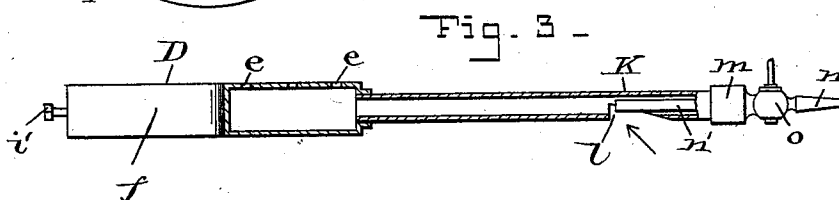
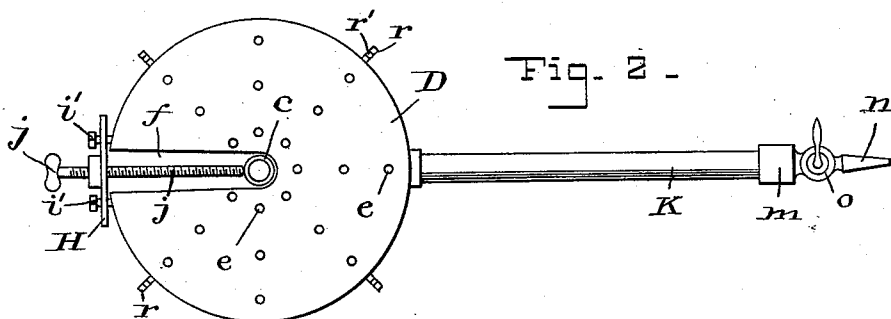
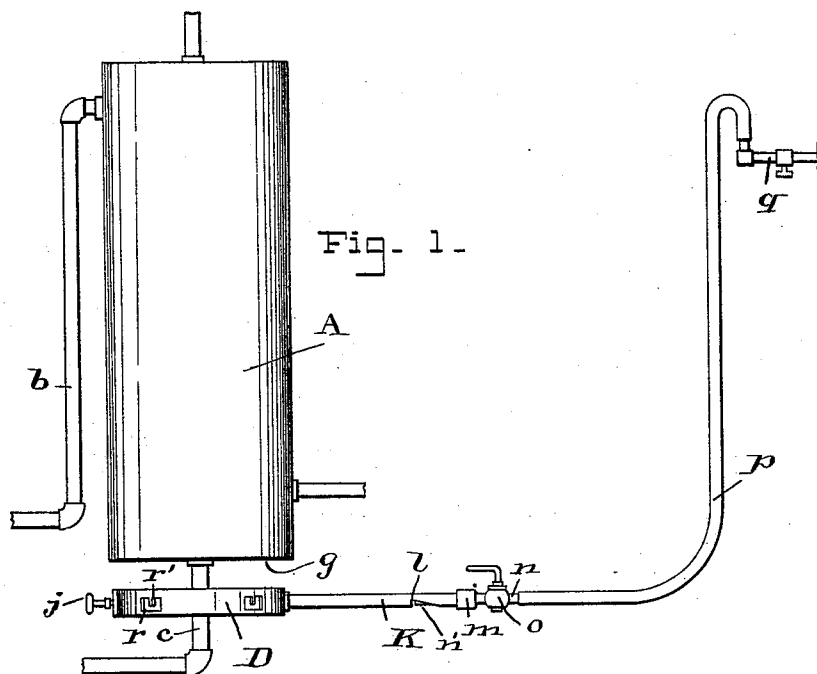


(No Model.)

A. HELLER.
HEATER FOR KITCHEN BOILERS.

No. 541,664.

Patented June 25, 1895.



WITNESSES :-

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UNITED STATES PATENT OFFICE.

ADAM HELLER, OF BALTIMORE, MARYLAND.

HEATER FOR KITCHEN-BOILERS.

SPECIFICATION forming part of Letters Patent No. 541,664, dated June 25, 1895.

Application filed April 19, 1894. Serial No. 508,115. (No model.)

To all whom it may concern:

Be it known that I, ADAM HELLER, a citizen of the United States, residing at Baltimore, in the State of Maryland, have invented certain new and useful Improvements in Heaters for Kitchen-Boilers, of which the following is a specification.

This invention relates to an improved heater or burner for kitchen boilers of the class which are heated by pipes connected with the water-back of a range.

The object of the invention is to provide an efficient gas burner capable of producing heat sufficient to heat the water in these boilers, and which may be readily attached to and supported by the water pipe commonly connected with these boilers.

The invention is illustrated in the accompanying drawings, in which—

Figure 1 shows a boiler and the improved burner attached. Fig. 2 shows a top plan view of the burner. Fig. 3 is a sectional view of the burner. Fig. 4 shows two views of the yoke-plate.

The boiler, A, stands upright and has circulating pipes, *b*, *c*, as usual the said pipe, *c*, entering the bottom head of the boiler at its center.

The burner comprises a horizontal chamber, D, the top plate of which has jet apertures, *e*, whereat the gas is ignited as it issues and numerous jets of flame are formed.

The chamber is a hollow shell and is preferably circular in its shape, except it has a radial space or opening, *f*, at one side as though a piece had been cut away. The object of this space, opening or cut-way is to receive the pipe, *c*, which enters the center of the bottom, *g*, of the boiler. In other words, the burner-chamber, D, is pressed sidewise against the vertical pipe, *c*, and the said space, *f*, takes about the pipe, thus allowing the burner chamber to nearly encircle the pipe, which latter has position at about the center of the chamber, D. A lock-plate, or yoke-plate, H, has two slots, *i*, which take over bolts, *i'*,—one at each side of the radial space, *f*. Thus the yoke-plate bridges across the space, *f*, and at the center this plate carries a set-screw, *j*. When the burner is to be attached to the vertical pipe, *c*, the yoke-plate, H, is first removed. The burner is then placed

against the pipe so as to have the pipe in the space, *f*, and then the yoke-plate is placed in position and the set-screw, *j*, tightened so as to cause its end to impinge against the pipe, *c*. Thus the burner is clamped on the pipe and may be located at any desired vertical position below the bottom of the boiler.

By reason of the top surface of the burner, D, nearly surrounding the vertical water-pipe, *c*, the jet apertures of the burner will extend below nearly the entire area of the bottom head, *g*, of the boiler.

A horizontal blow-pipe, K, is attached at one side of the chamber,—preferably in line with and diametrically opposite the radial space, *f*, so as to inject the admixture of air and gas into the chamber at both sides of the said wall. The approximately V-shaped point of the wall of this cut-out serves as a deflector to insure that the admixed gas and air entering the chamber from the opposite side will be supplied equably to all parts thereof, as hereinafter described. This blow-pipe, K, has a side opening, *l*, for the inlet of air and at the end has a cap, *m*, through which a gas-tube, *n*, passes endwise or longitudinally into the pipe, K. The end of the gas-tube has a jet-nozzle, *n'*, which is close by or in near relation to the air-inlet, *l*, in the pipe. A cock, *o*, in the gas-tube controls the passage of gas. A hose or flexible tube, *p*, connects from the gas-tube, *n*, to a gas-bracket, *q*, or other source of gas supply.

Projecting lugs, *r*, at the sides of the shell chamber, D, have slots, *r'*, for the reception of the lower edge of a metal plate or shield (not shown) which is to stand upright and is designed to serve as a guard to protect the wall or woodwork of the room from the heat.

In the operation of the device, after it has been attached to the water-pipe, *c*, and connection made with a gas-supply, the gas issuing from the jet-nozzle, *n'*, causes an indraft or suction of air at the inlet, *l*, and then the gas and air blow into the chamber, D, and the admixture of gas and air issues from the numerous jet-apertures, *e*, in the top-surface and produces a blue flame.

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

In a gas burner adapted for heating domes-

tic boilers, the combination of a partly-circular shaped shell-chamber having horizontal bottom and top plates the latter provided with jet apertures, *e*, and said chamber having a
5 wall forming an interior approximately V-shaped point and an exterior radial space or cutaway, *f*, adapted to take about a support; means to clamp the burner onto the support; and a blow-pipe, *K*, attached to the shell-
10 chamber at a point diametrically opposite the said approximately V-shaped point of the wall, whereby the admixture of air and gas

injected by the blow-pipe into the shell-chamber will be deflected by the said approximately V-shaped point and caused to enter 5 the spaces on both sides of the said wall, as and for the purpose described.

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

ADAM HELLER.

Witnesses:

CHAS. B. MANN, Jr.,
C. CALVERT HINES.