

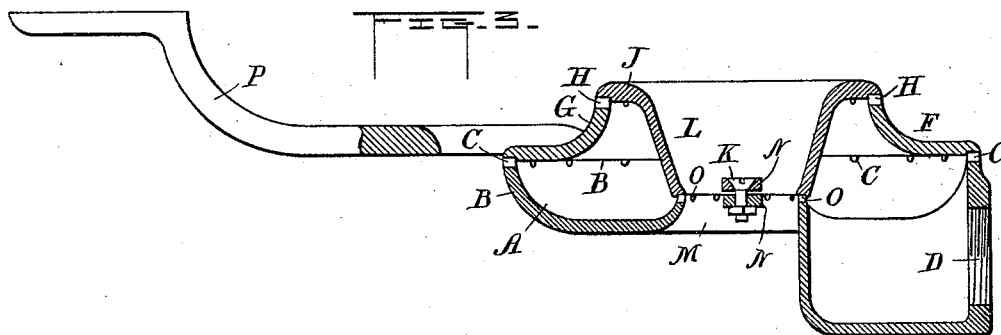
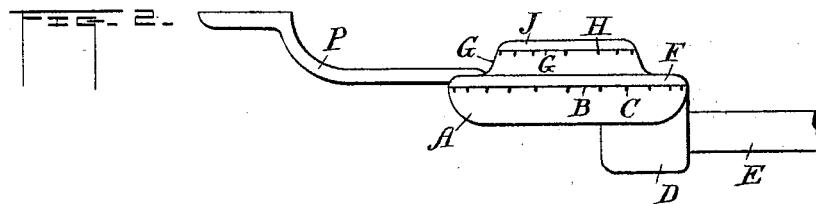
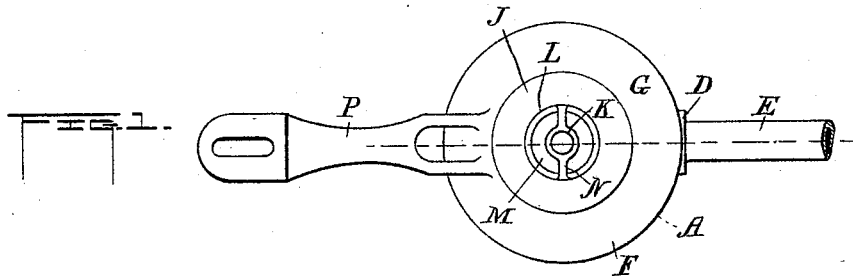
(No Model.)

2 Sheets—Sheet 1.

L. KAHN.  
GAS BURNER.

No. 454,910.

Patented June 30, 1891.



*Samuel Kahn*

WITNESSES

*Cleverance*  
*M. S. Belden*

INVENTOR

*by James W. See*  
*attorney*

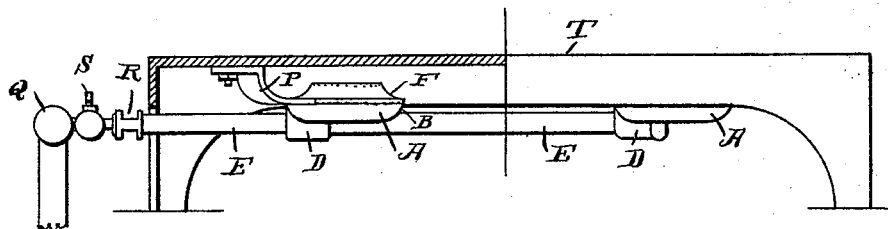
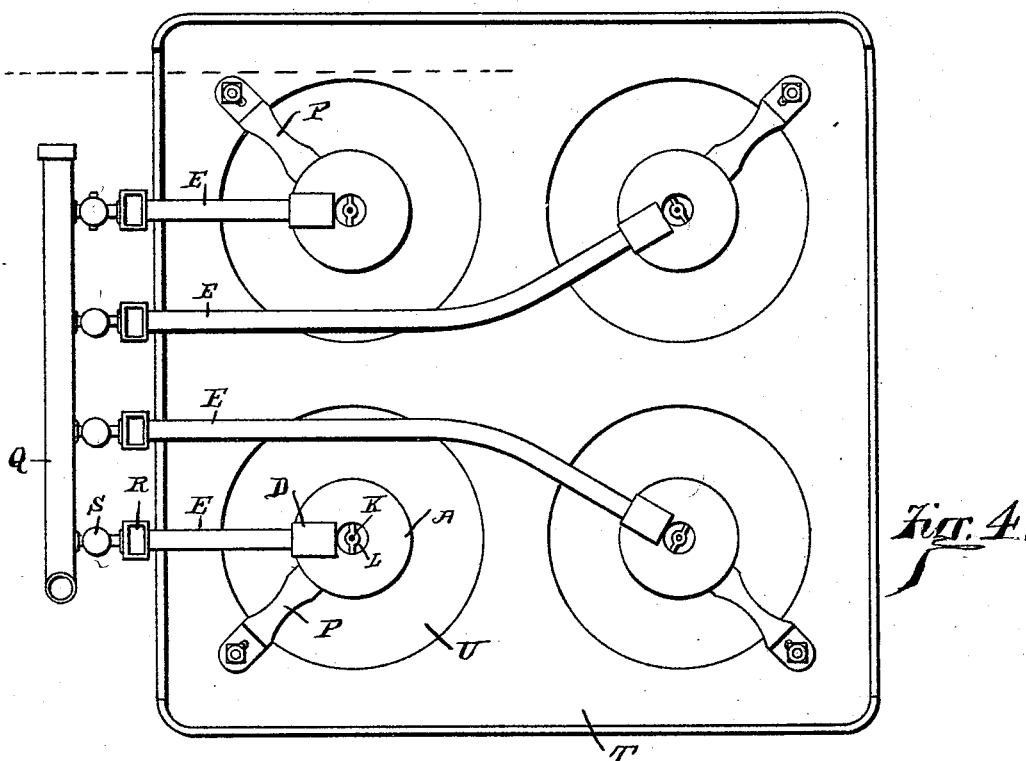
(No Model.)

2 Sheets—Sheet 2.

L. KAHN.  
GAS BURNER.

No. 454,910.

Patented June 30, 1891.



*Fig. 5.*

Witnesses:  
P. P. Sheehan  
W. S. Belden

Lazarus Kahn  
Inventor  
by James W. See  
Attorney

# UNITED STATES PATENT OFFICE.

LAZARD KAHN, OF HAMILTON, OHIO.

## GAS-BURNER.

SPECIFICATION forming part of Letters Patent No. 454,910, dated June 30, 1891.

Application filed November 1, 1890. Serial No. 370,094. (No model.)

*To all whom it may concern:*

Be it known that I, LAZARD KAHN, of Hamilton, Butler county, Ohio, have invented certain new and useful Improvements in Gas-Burners, (Case B,) of which the following is a specification.

This invention pertains to improvements in the large heavy gas-burners generally employed in connection with stoves or other heating or cooking apparatus, the weight and conditions of use of the burners being such that it becomes important to provide the burners with some rigid support independent of the pipe which supplies them with gas, and in which also it is desirable to provide for the ready opening of the burner.

My improvements will be readily understood from the following description, taken in connection with the accompanying drawings, in which—

Figure 1 is a plan of a burner embodying my present improvements; Fig. 2, a side elevation of the same; Fig. 3, a vertical section of the same upon a larger scale; Fig. 4, a bottom view of an exemplifying gas-stove shown as provided with four of my improved burners, and Fig. 5 a front elevation and vertical section of the same.

In the drawings, A indicates the shallow cup-shaped circular body of the burner; B, the upper annular rim thereof; C, a series of notches in this rim; D, a gas-inlet leading to the interior of the body; E, a pipe attaching to the body of the burner at such inlet for the supply of the gas; F, a disk seating down upon the rim B, the notches C thus forming jet-holes at the periphery of the burner; G, an upwardly-turned rim upon the disk F, concentrically disposed inwardly from the periphery of the disk; H, a series of notches in this rim of the disk similar to the notches C in the body of the burner; J, a cap-piece seating upon the disk-rim G and forming the top of the burner and causing the notches H to form an inner upper annular series of jet-holes for the burner; K, an axially-disposed bolt securing the cap-piece to the body of the burner and clamping the disk F between them; L, a centrally-walled central opening down through the cap-piece; M, a similar

opening through the bottom of the body of the burner, the walls of the openings L and M joining to form a central vertical tube through the burner; N, bridges across the openings L and M to receive the bolt K, which, when the central tube is employed, finds itself disposed in the axis of the tube; O, a series of notches at the juncture of the walls of the openings L and M, these notches forming a series of jet-holes leading from within the chamber of the burner to within the central vertical tube at or near the base of the tube; and P, an arm integrally with or rigidly united to the disk F and projecting radially therefrom and provided at its outer end with attaching features, exemplified as a slot to receive a bolt; Q, the usual gas-pipe, from which a number of burners on the stove take their supply; R, the usual mixers on the outer ends of the burner-pipes E; S, the usual gas-cocks to shut off the gas to the several burners; T, the top of the stove, to which the burners are applied, and U the cooking-holes in the top of the stove.

Assume that the burner is to be used in connection with a cooking-stove and that several of the burners are employed in the stove—say a four-hole stove—and that the gas-supply pipes cannot come to all the burners in a uniform direction, and that the points of support of the burners vary in direction from the centers of the several burners. In such case the arms F may be bolted under the top plate of the stove, the arms projecting in any expedient direction from the centers of the burners, the centers of the burners being, as usual, disposed concentric to the top holes of the stove. The arms of the several burners may project in different directions, according as the points of attachment determine. The bolt K may then be loosened and the body of the burner rotated upon a vertical axis till the supply-pipe projects in the desired direction, whereupon the bolt may be again tightened. The arm P and supply-pipe E may thus be adjusted to any desired angle with reference to each other, thus adapting the burner to any predetermined condition of direction of supply-pipe and attaching-point with reference to each other and to the center

of the burner. This feature of the burner is entirely independent of the presence of the central tube and entirely independent of the fact that the burner may have one or more series of jet-holes.

5 The body A of the burner is a simple casting, and the notches C may be cast in its rim, and similarly the notches H may be cast in the rim of the disk F. The union of the parts  
10 forms the notches into jet-holes and permits of the ready opening of the burner for the cleaning of the notches. Furthermore, it is often found in practice that the size of the jet-holes should be adjusted with reference  
15 to the quality or pressure or supply of the gas being used, and it is often found expedient in sending stoves to a market where the exact gas conditions are not fully known to make the jet-holes small and to enlarge them  
20 to suit the ascertained conditions. The form of burners shown permits of the ready opening of the burners and the exposure of the notches, so that they may be enlarged by the simple operation of filing, which can be done  
25 in most any situation where such stoves are likely to be employed, and this capacity for treatment holds good, notwithstanding the

burner may have the two series of jet-holes C and H.

The open central tube may be embodied as 30 desired, and if the tube be employed, as will be found preferable, it may be preferred to embody the jet-holes O to form a sub-burner to heat the gas within the chamber of the burner, as in my patent, No. 401,783. If such 35 central tube and jet-holes be employed, as in the exemplification, then the system of construction set forth permits of the construction and subsequent treatment of the sub-burner jet-holes O with the same facility as 40 the other jet-holes.

I claim as my invention—

In a gas-burner, the combination, substantially as set forth, of two concentric burner parts joined to and adapted for angular ad- 45 justment with reference to each other, a supporting-arm rigidly attached to one of said burner parts, and a supply-pipe attached to the other of said burner parts.

LAZARD KAHN.

Witnesses:

J. W. SEE, /

P. P. SHEEHAN.