

(No Model.)

W. C. PERKINS.
GAS STOVE.

No. 430,402.

Patented June 17, 1890.

Fig. 1

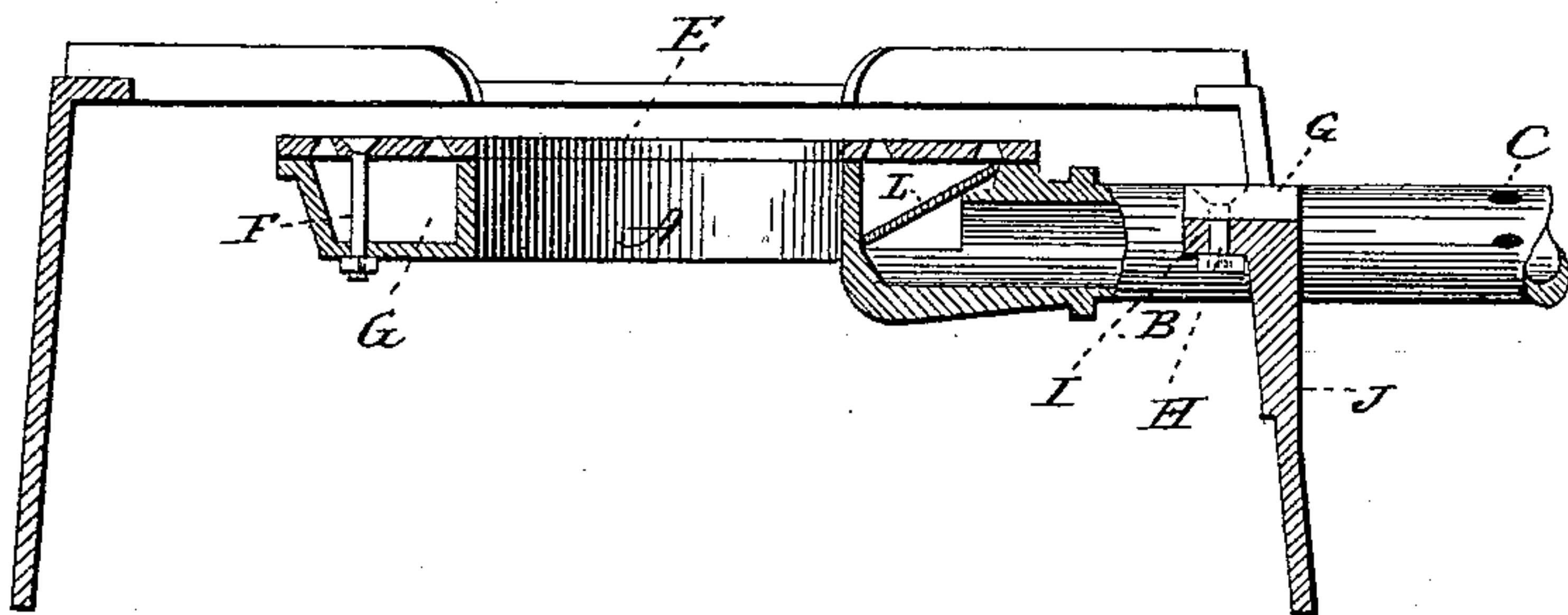


Fig. 2

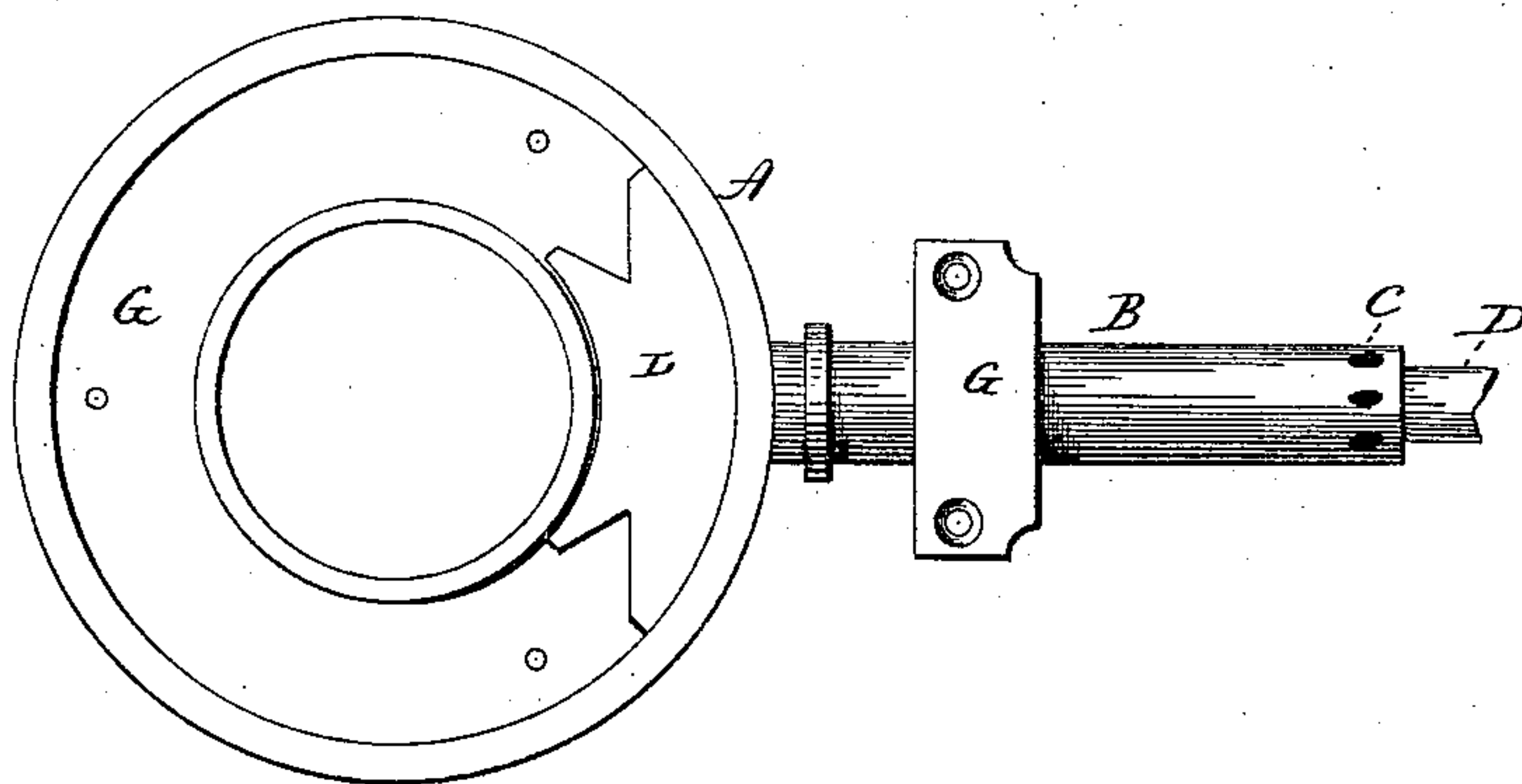
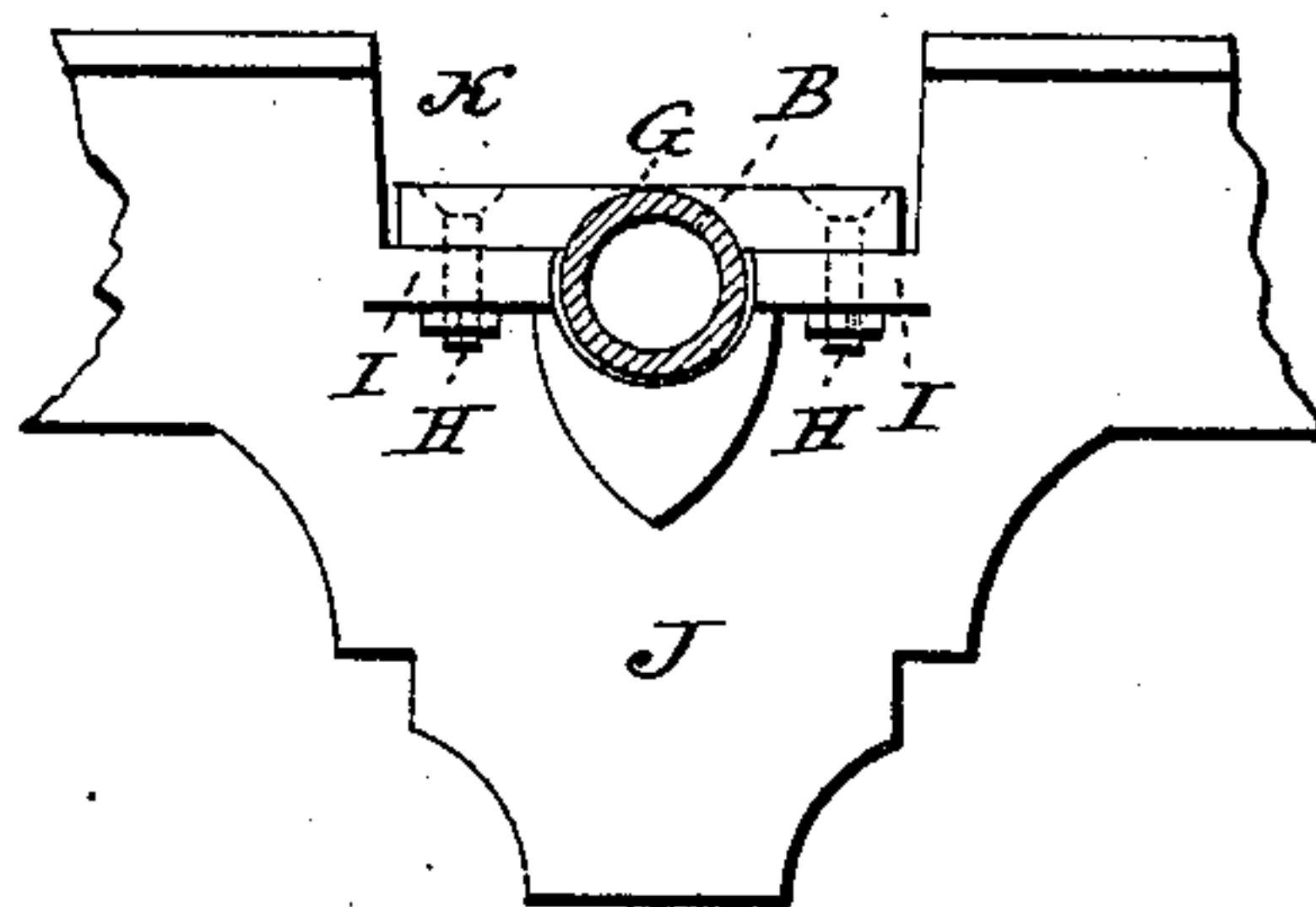


Fig. 3



Witnesses
J. H. Humway.
Lillian D. Kelsey.

William C. Perkins
Inventor
By atty
Earle H. Seymour

UNITED STATES PATENT OFFICE.

WILLIAM C. PERKINS, OF NEW HAVEN, CONNECTICUT, ASSIGNOR TO THE
NEW HAVEN WIRE GOODS COMPANY, OF SAME PLACE.

GAS-STOVE.

SPECIFICATION forming part of Letters Patent No. 430,402, dated June 17, 1890.

Application filed December 9, 1889. Serial No. 333,025. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM C. PERKINS, of New Haven, in the county of New Haven and State of Connecticut, have invented new
5 Improvements in Gas-Stoves; and I do hereby declare the following, when taken in connection with accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same,
10 and which said drawings constitute part of this specification, and represent, in—

Figure 1, a view in vertical section of a gas-stove embodying my invention, the burner and the standard therefor being shown; Fig.
15 2, a detached plan view of the burner; Fig. 3, an enlarged broken view in inside elevation, showing the attachment of the burner to the standard.

My invention relates to an improvement in
20 gas-stoves, the object being to provide for equalizing the pressure of the commingled gas and air throughout the burner and for preventing the flame from running, or, as it is termed, "firing," back into the supply-pipe
25 and burning the supply-tube.

With these ends in view my invention consists in an inclined baffle-plate located at the intersection of the supply-pipe with the body of the burner.

30 As herein shown, the burner of the stove consists of an annular body A, provided with a supply-pipe B, having perforations C for the inlet of air formed in it, and adapted at its outer end for the attachment of the flexible gas-supply tube D, of which a short section is shown. A perforated annular ring E,
35 secured to the said body A by screw-bolts F, completes the burner, which contains an annular chamber G for commingled gas and air. The said supply-pipe B has a transverse bar G, formed integral with it and perforated at each end to receive screw-bolts H, passing through horizontal lugs I I, formed in the standard J on opposite sides of a slot K,
40 made in the edge thereof to receive the pipe.
45

The construction above described is not of my invention, and is known to the trade.

My invention resides in a baffle-plate L,
50 made independently of the burner and located in the chamber G at the intersection thereof

by the supply-pipe B, and placed in an inclined position, its inner edge being seated against the lower end of the inner wall of the body of the burner and its outer edge extending upward and outward and meeting the upper edge of the outer wall of the body of the burner. 55

As herein shown, the baffle-plate is of segmental form to adapt it to an annular body, to which, however, its use is not limited. It
60 may therefore have different forms, although it will retain its location and deflecting position. As herein shown, its ends are notched to permit the freer escape of gas and air from under it; but the notches are not essential, and I do not limit myself to them. 65
As the gas enters the supply-pipe from the gas-supply tube it is met by currents of air passing in through the perforations in the pipe through which the gas and air commingling flow. When the mixture strikes the inclined baffle-plate, it is deflected by the same in opposite directions and escapes in opposite directions under the ends thereof. The baffle-plate therefore acts to divert the mixture from the point where it enters the burner and equalizes its pressure throughout the same; but for the plate the pressure would be stronger at the said point than elsewhere and the action of the same would be uneven. 80
Some of the mixture flows back over the plate and, escaping through the perforations in the ring, burns on the outer surface thereof; but the plate always stands between the jets of flame and the incoming stream of commingled gas and air and prevents the flame from running or firing back into the supply-pipe, as often happens in gas-stoves of the type to which mine belongs as they are now constructed. With my improved baffle-plate the burner may be lighted at any point on the ring, whereas under the prior constructions referred to particular care must be taken in lighting the burner to prevent the flame from firing back. 85
95

By locating the baffle-plate in an inclined position, as described, the commingled gas and air is thrown down upon the bottom of the burner-body, and thus more evenly diffused therein prior to burning than when de- 100

flected laterally by a vertical baffle-plate. The described diffusion of the commingled gas and air secures an even pressure thereof in the burner-body than is had with a vertical plate
5 and the action of the stove made more steady and uniform; but perhaps the most important advantage derived from locating the baffle-plate in an inclined position is that of preventing the flame from firing back into the
10 supply-pipe and igniting the gas there, this being made impossible by the inclined plate, which cuts off communication between the adjacent holes in the ring and the supply-pipe, the jets from these holes being the ones
15 which ignite the gas in the pipe.

Having fully described my invention, what

I claim as new, and desire to secure by Letters Patent, is—

In a gas-stove, the combination, with a burner-body, of a perforated ring, a supply- 20 pipe opening into the burner-body, and a baffle-plate made independently of the said body and ring and located in an inclined position over the intersection of the supply-pipe with the interior of the body, whereby the adjacent 25 holes in the ring are cut off from direct communication with the supply-pipe and firing back avoided, substantially as described.

WILLIAM C. PERKINS.

Witnesses:

FRED C. EARLE,
LILLIAN D. KELSEY.