

P. KELLER.
Gas-Regulator.

No. 228,079,

Patented May 25, 1880.

Fig. 1.

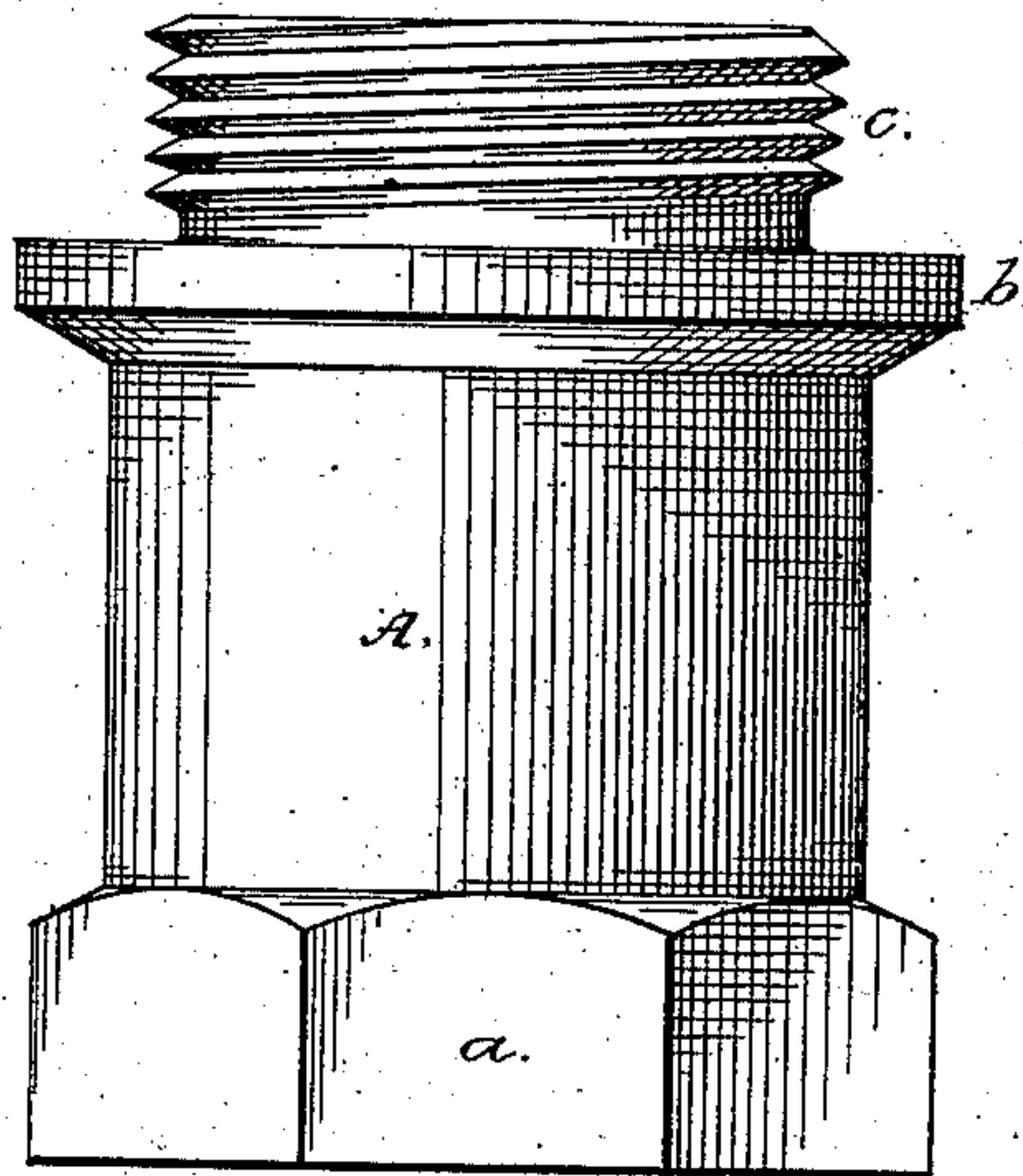


Fig. 2.

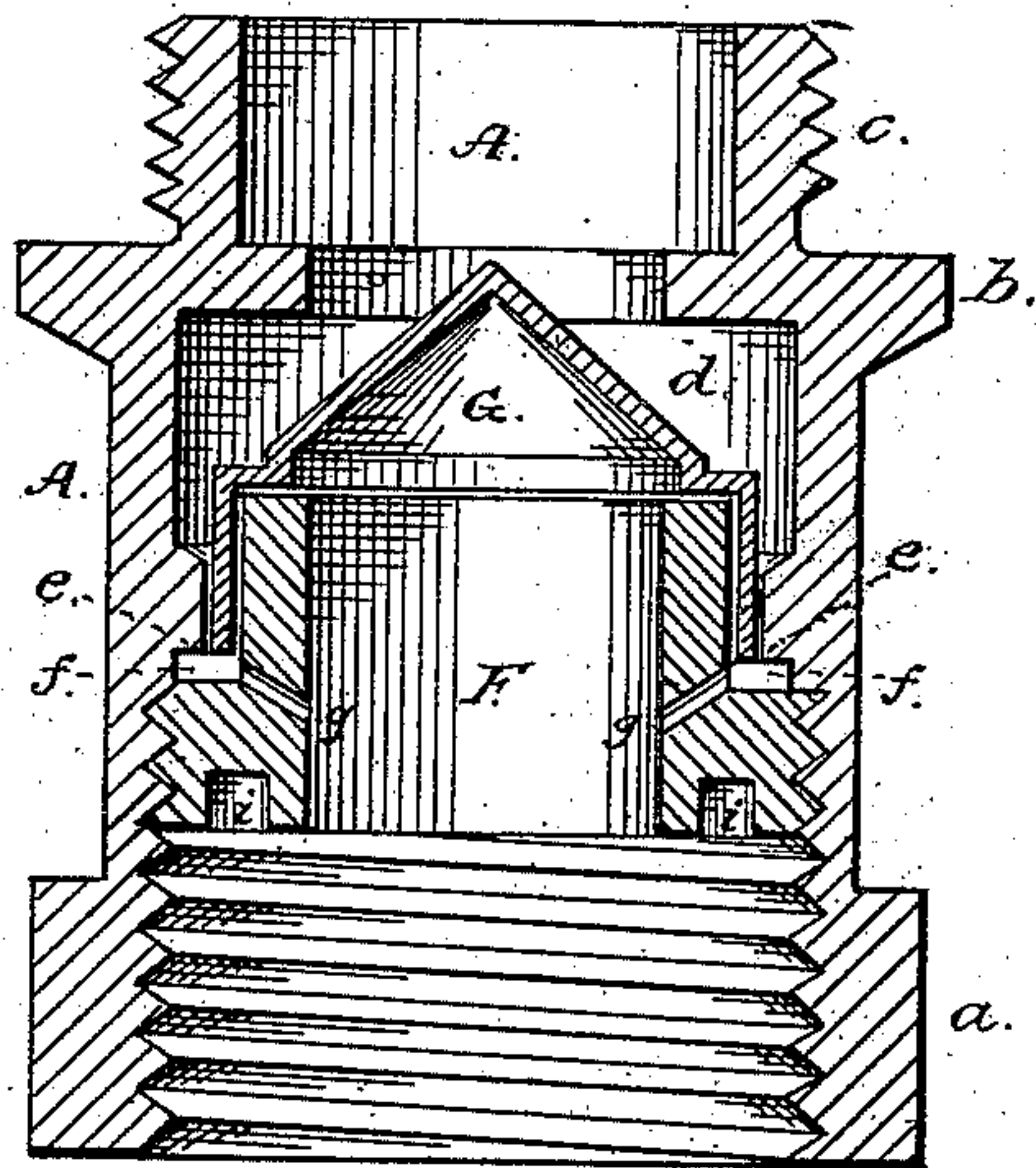
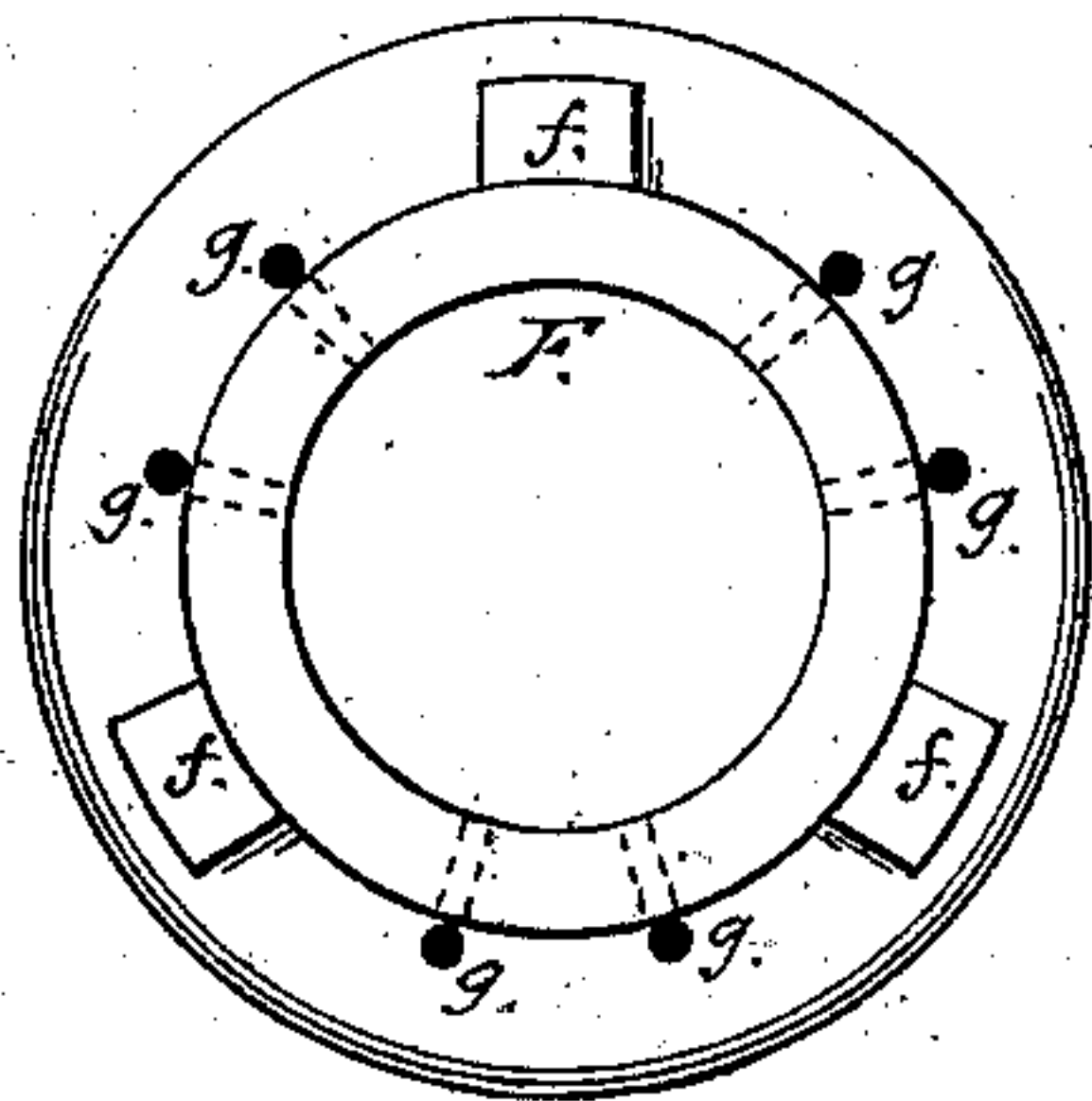


Fig. 3.



Witnesses:

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UNITED STATES PATENT OFFICE.

PETER KELLER, OF CHICAGO, ILLINOIS.

GAS-REGULATOR.

SPECIFICATION forming part of Letters Patent No. 228,079, dated May 25, 1880.

Application filed October 13, 1879.

To all whom it may concern:

Be it known that I, PETER KELLER, of Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Gas-Regulators; and I do hereby declare the following to be a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to a device for automatically regulating the flow of gas to the burners for the purpose of producing a steady and more uniform light, and, more particularly, it relates to that class of regulators or gas-checks having cup-shaped gravitating valves similar to those described in Letters Patent No. 218,677, which were granted to me on August 19, 1879.

My invention consists in providing the nipple which carries the valve with vents drilled through its walls in a downward direction for carrying off the condensed gas, and, further, in the construction, arrangement, and combination of the parts composing my gas-regulator, as fully hereinafter explained.

In the drawings, Figure 1 represents an exterior elevation of the gas-flow regulator. Fig. 2 represents a vertical section through the center of the same, and Fig. 3 is a plan of the nipple-plug.

Like letters in the several figures of the drawings designate like parts.

A denotes the cylindrical casing, having at its base an octagonal flange, *a*, for applying a screw-wrench, and having at its upper end the exteriorly and internally projecting annular flange *b*. This flange *b* again forms the base or shoulder for the exteriorly screw-threaded neck *c*, which is of a smaller diameter than the body of the casing, and is to make a tight-joint connection with the gas-pipe coupling. This casing *A* is bored out to form the valve-chamber *d* between flange *b* and a ring-shoulder, *e*, and the lower half of said casing is internally screw-threaded for securing the nipple-plug *F* therein and for coupling it with the screw-threaded gas-outlet nozzle of the meter.

The nipple *F* consists of a hollow plug having two diametrically-opposite sockets, *i*, in its under face for applying a fork-wrench. It is screwed into the casing from below until it butts against the shoulder *e*, and to its upper face it has a cylindrical extension for holding the valve *G*. This valve *G* is spun of sheet metal, so as to be cup-shaped, it having an annular rim and a conical top.

The upper face of the screw-threaded portion of the nipple-plug *F*, which forms an offset or shoulder, is provided with small radial ribs *f* for the lower edge of valve *G* to be seated upon, which ribs will prevent the said valve from closing the passage for the gas entirely, thereby causing the said valve to be raised off its seat by the flowing gas only when more than one or two burners are to be supplied by gas.

Through the walls of the nipple-plug, in a downward direction toward its bore, are drilled a series of small vents, *g*, for leading off the condensed vapor which may collect from the passing gas, thereby preventing the accumulation of water or volatile hydrocarbon around said valve, which would interfere with the free passage of the gas from under the valve.

As will be noticed by my above arrangement, by lighting one or two burners the valve *G* will remain intact, and will permit a sufficient quantity of gas to circulate from under; but by turning on more burners the valve *G* will be raised off its seat proportionally to allow a sufficient supply of gas, and the valve, floating upon the gas-current, will rise and fall with the irregularities of pressure from the gas-holder, and with its being raised the opening around its conical top will be reduced. In this manner the valve *G* will automatically check the current, so that a uniform supply will be furnished to each burner independent of the number of burners turned on, thereby obtaining a more steady light with a diminished consumption of gas.

Without the ribs *f*, or their equivalents, the valve *G* would have to be raised by the passing gas for the first burner to be lighted, when the gas-jet would be slow in issuing.

The above-described improvements are par-

ticularly of advantage with the larger sizes of gas-regulators, and may be embodied in single or double gas-check valves.

What I claim as my invention is—

- 5 1. The combination, with the casing A and gravitating valve G, of nipple-plug F, having vents *g*, as and for the purpose set forth.
2. The combination, with casing A, of nipple-

plug F, having sockets *i*, ribs *f*, and vents *g*, and of valve G, all constructed and arranged substantially as and for the purpose described and shown. 10

PETER KELLER.

Witnesses:

EMIL H. FROMMANN,
OLIVER W. MARBLE.