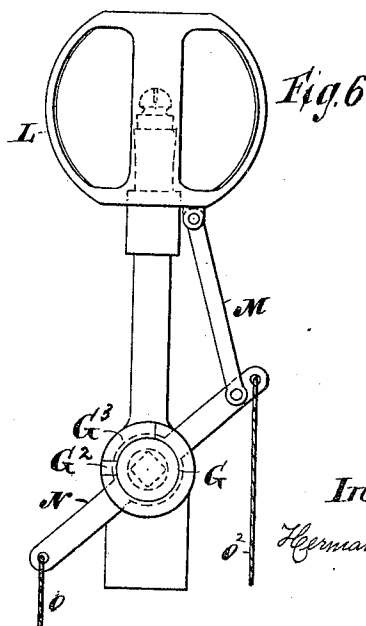
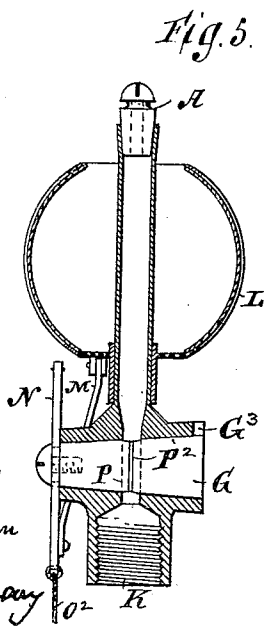
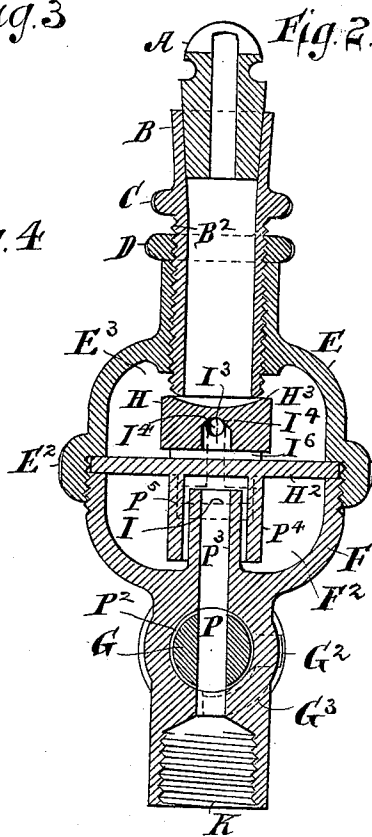
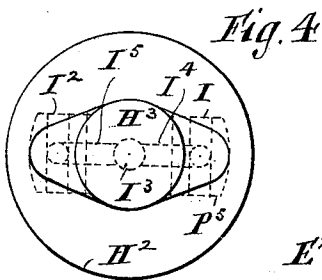
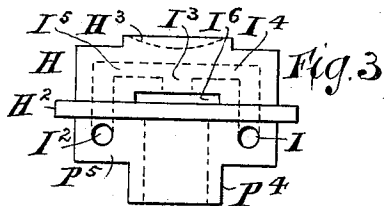
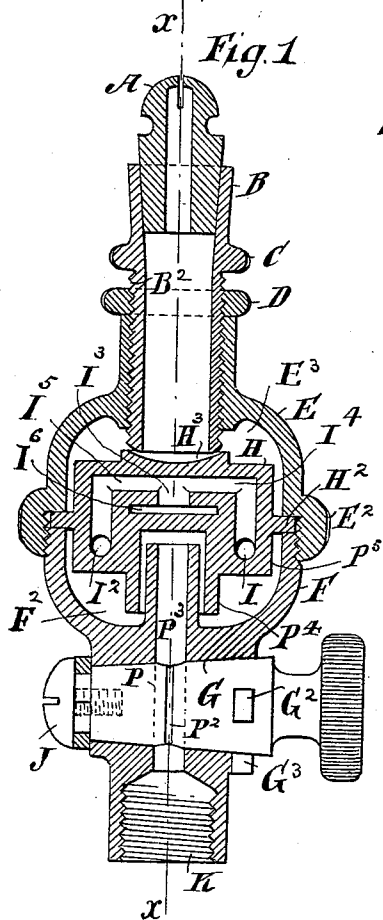


(No Model.)

H. EPPRECHT.
GAS BURNER.

No. 520,521.

Patented May 29, 1894.



Witnesses
Geo. Wadman
Thos. A.
Macanlay

Inventor
Herman Epprecht

UNITED STATES PATENT OFFICE.

HERMAN EPPRECHT, OF NEW YORK, N. Y.

GAS-BURNER.

SPECIFICATION forming part of Letters Patent No. 520,521, dated May 29, 1894.

Application filed May 22, 1893. Serial No. 475,141. (No model.)

To all whom it may concern:

Be it known that I, HERMAN EPPRECHT, of the city, county, and State of New York, have invented certain new and useful Improvements in Gas-Burners, of which the following, with the accompanying drawings, is a specification.

My invention relates to improved devices for attenuating the force or pressure of the gas, and to a device for forming a continuous flame of reduced size and other improvements hereinafter more fully described and set forth in the claim.

In the drawings, Figure 1 is a partly sectional view of the invention. Fig. 2 is a sectional view on line X. X. of Fig. 1. Figs. 3 and 4 are detail views. Figs. 5 and 6 are views showing flame protector and means for operating it.

A is the tip or burner.

B is an adjustable tip holder having a screw extension B².

C is a milled thumb-nut on the tip holder.

D is a lock nut.

E is the upper semi-globular shell having a milled rim E², and screw threaded on the inside.

F is the lower semi-globular shell, also screw threaded, to fit into the upper shell, also containing the seat for the key G, and the nut K for attaching it to the main gas pipe.

G is the key of the usual form but having a circumferential groove P² in line with the gas conduit P.

G² is a spur on key.

G³ is a stop on the lower shell.

H is a deflector or gas check having a flange H², and secured between, and separating the upper shells E³ and F², and having a downwardly extending hood or cap P⁴ covering and overlapping the upwardly projecting gas conduit P³.

H³ is the upper concaved end of the deflector.

I, I², I⁴, I⁵ are gas passages in the deflector. I³ is a downwardly projecting gas passage in the deflector.

I⁶ is the end of the gas passages I, I² leading into the chamber E³.

J is the usual nut securing the key in position.

K is the nut or screw for attaching the device to the main gas pipe.

L is a globe or flame protector.

M is a connecting rod.

N is a lever.

O, O² are chains for operating the lever N.

P is the gas conduit in the key G.

P² is a circumferential groove cut in the key G.

P³ is an upwardly projecting stem having a continuation of the gas conduit.

P⁴ is a downwardly projecting stem on the deflector H.

P⁵ is a shoulder on the deflector H containing the holes or gas passages I, I².

When the key is fully open the gas enters at K, passing through the conduit P to P³, striking the deflector H thereby arresting or attenuating its force or pressure somewhat; continuing down between the downwardly projecting part P⁴ and upwardly projecting part P³ and out into the lower chamber F², striking the bottom of the chamber F², again diminishing its pressure by arresting its course; then it passes into the passages or openings I, I² in the deflector, taking an upward direction, then goes in a horizontal direction through the passages I⁴, I⁵, then downwardly through the passage I³ and out through the slit I⁶ into the upper chamber E³, then out between the concave upper end of the deflector H, and the end of the screw B² and out to the tip A to be consumed. It will be readily perceived that the gas having passed through so circuitous a series of passages from pipe K to tip A and having its course arrested and deflected so many times before being consumed must have lost materially its force of pressure and that it is also heated by the heat of the tip being conducted to the parts below it, the result is a steady flame.

When it is desired to shut off the full light, the key G is turned in the usual manner by bringing the stop G² on the key in contact with the stop G³ of the lower shell F, this shuts off the flow of gas through the conduit P in the key. The gas now flows around the circumferential groove P², finding its way to the tip through the same passages as before, thus providing a small flame for relighting or other uses. The volume of gas admitted

to the burner is regulated by screwing the tip holder B, B² in or out of the upper shell, bringing the lower end of the screw B² nearer to the concave upper end of the deflector H, and
5 thereby reducing the size of the passage through which the gas can pass. The locknut D is provided to secure the adjustment of the tip holder where desired and to prevent the escape of gas between the threads, the screw
10 threads being pulled tightly together. When it is desired to use a flame protector. The key may be operated by a lever secured to it and the lever may be operated by chains or cords O, O², as shown.
15 I have shown the device for regulating the volume of gas to be the tip holder, but it is manifest that a device, separate and inde-

pendent of the tip holder may be constructed to regulate the volume of gas from the outside. I do not therefore limit my claim to an outside gas regulating device of which the tip holder forms part.

Having described my invention, I claim—

In a gas burner, a gas chamber composed of two parts in combination with a deflector 25 having the downwardly projecting hood P¹, and the chamber F², said deflector having the passages I, I², I³, I⁴, I⁵ and I⁶, substantially as set forth.

HERMAN EPPRECHT.

Witnesses:

A. L. AUSTIN,
THOS. A. MACAULAY.