

(No Model.)

F. SIEMENS.
REGENERATIVE GAS LAMP.

No. 452,808.

Patented May 26, 1891.

Fig. 1

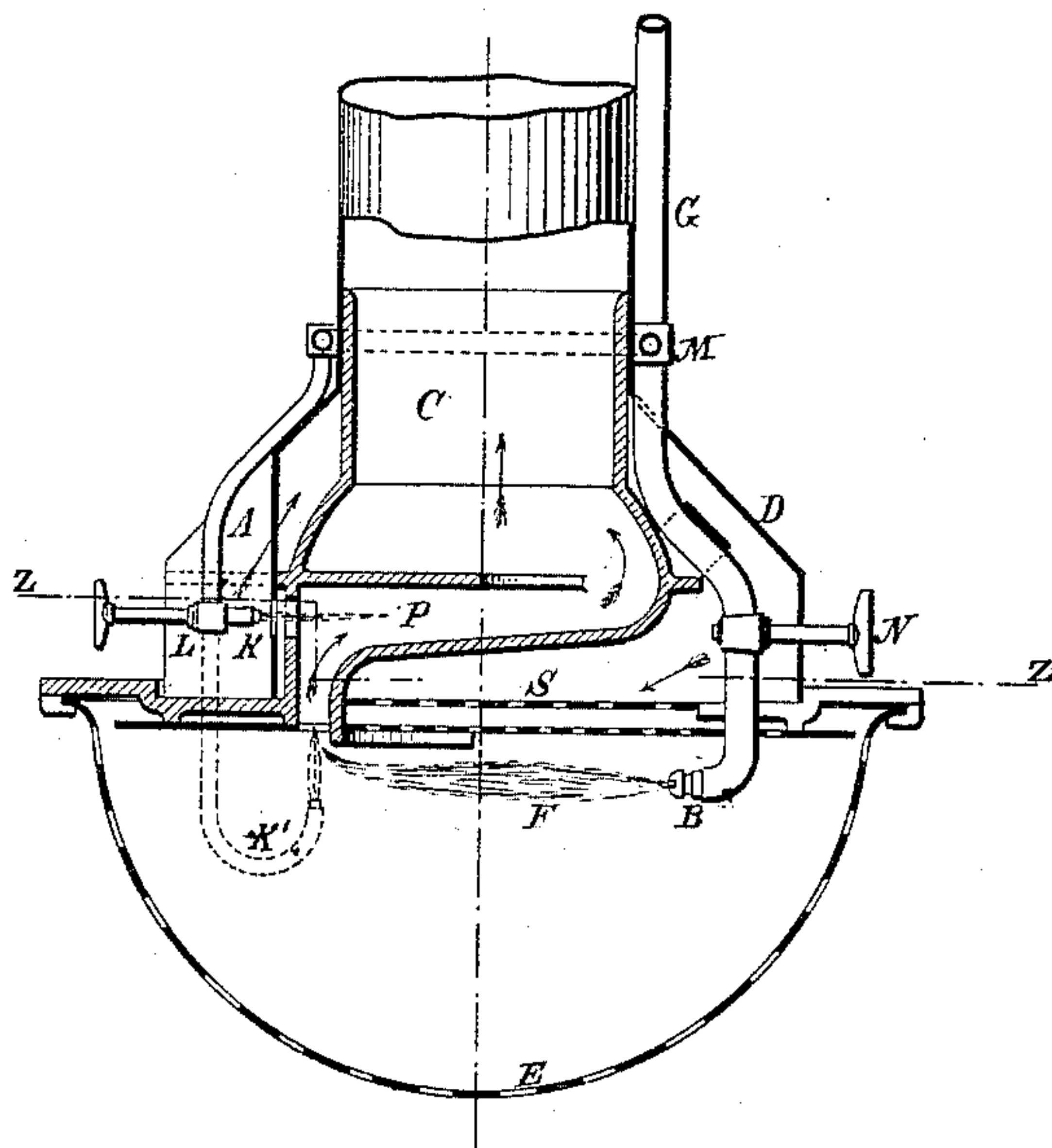
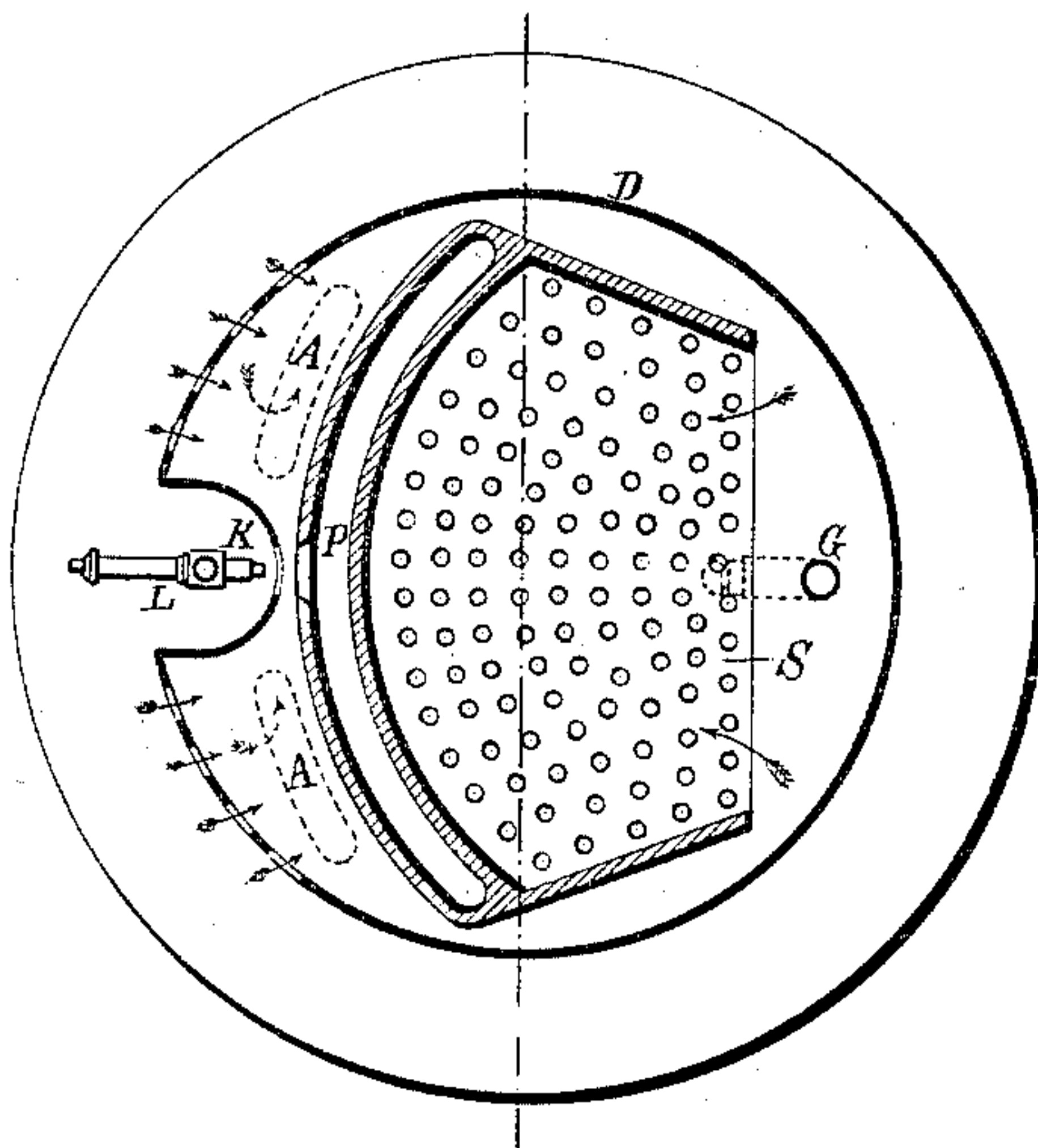


Fig. 2



WITNESSES

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FREDERICK SIEMENS, OF DRESDEN, GERMANY.

REGENERATIVE GAS-LAMP.

SPECIFICATION forming part of Letters Patent No. 452,808, dated May 26, 1891.

Application filed October 11, 1888. Serial No. 287,870. (No model.) Patented in Germany May 10, 1887, No. 42,121, August 18, 1887, No. 43,992, and November 17, 1887, No. 44,073; in England May 25, 1887, No. 7,610; in France June 11, 1887, No. 179,187; in Belgium June 11, 1887, No. 77,783; in Spain August 16, 1887, Nos. 7,117 and 11,233, and in Austria-Hungary November 13, 1887, No. 37/2,250, and February 26, 1888, No. 38/367.

To all whom it may concern:

Be it known that I, FREDERICK SIEMENS, a citizen of Saxony, residing at Dresden, in the Empire of Germany, have invented a new and useful Improvement in Regenerative Gas-Lamps, of which the following is a specification, and for which I have obtained a patent in Great Britain, dated May 25, 1887, No. 7,610; in France, dated June 11, 1887, No. 179,187; in Belgium, dated June 11, 1887, No. 77,783; in Spain, dated August 16, 1887, Nos. 7,117 and 11,233; in Germany by patents dated May 10, 1887, No. 42,121, August 18, 1887, No. 43,992, and November 17, 1887, No. 44,073, and in Austria-Hungary by patents dated November 13, 1887, No. 37/2,250, and February 26, 1888, No. 38/367.

My invention relates to a simple construction of regenerative gas-lamp—that is to say, a lamp the flame of which is supplied with air heated by the products of combustion—as I will describe, referring to the accompanying drawings.

Figure 1 is a vertical section of the lamp. Fig. 2 is a sectional plan on the line $z z$ of Fig. 1.

G, the gas-supply pipe, has a regulating-cock N and terminates in a flat flame-burner B, directing the flame horizontally forward.

The products of combustion ascend to the chimney C by a reverted passage P, formed in the base of the chimney.

Around the base of the chimney there is a casing D, to which air enters by apertures A.

The air passing round outside the base of the chimney and becoming heated by contact with the metal that is heated by passage of the products of combustion, passes through the perforations of screens S to supply the flame F, being still further heated by the screens, the lower of which is itself heated by radiation from the flame. The perforated screens S are preferably double, as shown, the lower one being enameled white on its lower face to operate as a reflector. There may, however, be only one such reflecting-screen, either flat, as shown, or curved. A glass or opaline basin E incloses the flame,

preventing access of air other than that which is heated within the casing D.

For the purpose of kindling the flame a small burner K, supplied by a branch from the main gas-pipe G, is lighted externally, its flame extending into the passage P, so as to kindle the main gas-flame, after which the flame of K may be extinguished by closing the cock L.

When it is desired to maintain a kindling-flame always burning, the kindling-burner may be arranged within the basin, as indicated by the dotted lines K', and in this case instead of the two cocks L and N the main gas-pipe G may have a three-way cock at M, the branch for the kindling burner, so as to supply it and the main flame alternatively. Instead of a single burner B, there may be two or more branching from the pipe G, so arranged that their flames do not overlap each other.

I am aware that a regenerative gas-lamp has been constructed with a central draft tube and inclined flat flame-burners on each side of said draft-tube, and such I do not claim as my invention.

Having thus described the nature of my invention and the best means I know for carrying the same into practical effect, I claim—

1. In a regenerative gas-lamp, the combination of a chimney, a mouth in one side of the base thereof, and an inclosed horizontal flame-jet under the base of the chimney and opposite the said mouth, as and for the purposes described.

2. In a regenerative gas-lamp, the combination of a chimney having a mouth in one side of the base thereof, a reverted air-passage in the said chimney connected with the said mouth and passing above the base of the chimney, and an inclosed horizontal flame-jet opposite the said mouth, as and for the purposes described.

3. In a regenerative gas-lamp, the combination, with a chimney having a mouth in one side of its bottom, of an inclosed horizontal flat flame-jet beneath the said chimney and diametrically opposite the said mouth, and a

perforated screen between the bottom of the chimney and flame-jet through which heated air is supplied to the flame, as and for the purposes described.

- 5 4. In a regenerative gas-lamp, the combination, with a chimney having an arc-shaped mouth on one side of the base thereof, of an inclosed horizontal flame-jet beneath the said chimney and diametrically opposite the said
10 mouth, a perforated screen between the bottom of the chimney and the flame-jet through which heated air is supplied to the flame, and

an auxiliary kindling-burner the flame of which ascends the chimney, as and for the purposes described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses. 15

FREDERICK SIEMENS.

Witnesses:

C. MAX HERMANN,

MAX. SCHULSE,

Both of Dresden.