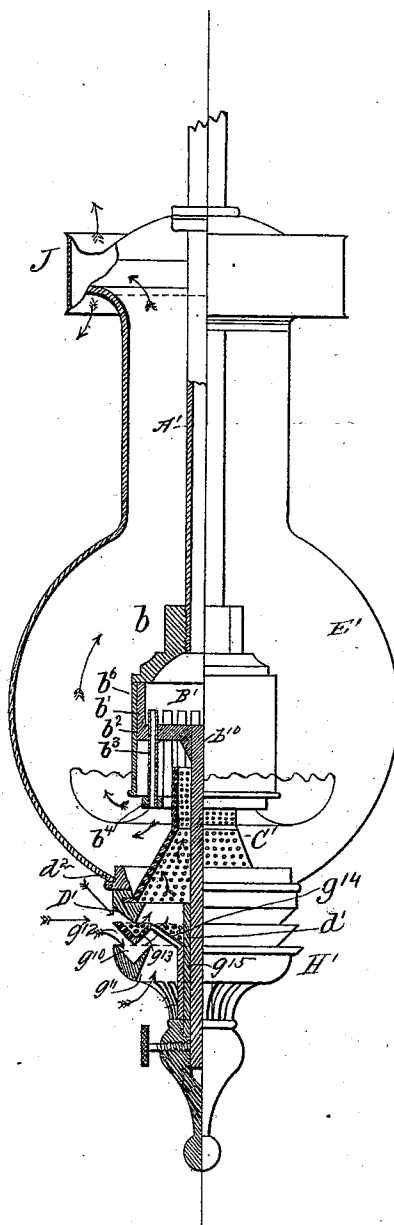


(No Model.)

T. GORDON & W. R. SWIFT.
LAMP HAVING REGENERATIVE BURNER.

No. 554,866.

Patented Feb. 18, 1896.



WITNESSES:

William M. Shiff

Edmonds

INVENTORS

INVENTORS
Thomas Gordon
William A. Swift

BY Ervin H. Brown THEIR ATTY.

UNITED STATES PATENT OFFICE.

THOMAS GORDON AND WILLIAM R. SWIFT, OF NEW YORK, N. Y.,
ASSIGNORS TO THE GORDON-MITCHELL GAS LAMP COMPANY,
OF SAME PLACE.

LAMP HAVING A REGENERATIVE BURNER.

SPECIFICATION forming part of Letters Patent No. 554,866, dated February 18, 1896.

Application filed April 3, 1891. Serial No. 387,500. (No model.)

To all whom it may concern:

Be it known that we, THOMAS GORDON and WILLIAM R. SWIFT, of New York, in the county and State of New York, have invented a certain new and useful Improvement in Lamps Having Regenerative Burners, of which the following is a specification.

We will describe a lamp embodying our improvement and then point out the novel features in the claims.

In the accompanying drawing the figure represents a lamp having a regenerative burner embodying our improvement.

A' designates a gas-supply pipe descending from any suitable source of gas, and B' designates a gas-chamber consisting of a top *b*, a cylindric part *b'* and a diaphragm *b²* formed integral with said cylindric part. The top may be united by a screw-thread or otherwise with the cylindric part. A number of tubes *b³* are arranged in a circular row and fitted to the diaphragm *b²*. Their upper ends extend into the gas-chamber and their lower ends extend to a considerable distance below the same. The lower ends pass through holes in a ring *b⁴*, which serves to sustain them transversely. Outside the cylindric part *b'* of the gas-chamber a deflector consisting, as here shown, of a cylindric sheet-metal shell *b⁵*, is fitted. This deflector extends almost as low as the gas-tubes *b³*. The upper part of the gas-chamber communicates with and is attached to the gas-supply pipe. From the lower diaphragm or bottom of the gas-chamber a post *b¹⁰* extends. To the lower extremity of this post a part H' is attached by means of a screw-thread, a set-screw H² or otherwise. The upper portion of the part H' has a number of radial passages for the entrance of air and at its outer circumference an upwardly-inclined flange *g¹⁰*, from whose inner edge extends upwardly an inclined flange *g¹¹*. Above the flange *g¹⁰* a similarly-inclined ring *g¹²* is arranged. This has an upwardly-inclined flange *g¹³* at its inner edge. The ring *g¹²* and its flange *g¹³* are shown as being made of perforated sheet metal and supported by arms *g¹⁴* extending to a cylinder *g¹⁵* which rests upon the part H'. The ring *g¹²* and its flange *g¹³* may, however, be made of imperforate metal. Above the ring *g¹²* is a ring D', which is supported by arms extending from a cylin-

der *d'*, surrounding the post *b¹⁰* and resting upon the part H'. This ring D' has the lower portion of its outer surface inclined similarly to the ring *g¹²* and the lower portion of its inner surface inclined like the flange *g¹³* of this ring. The upper part of the ring D' is provided with a seat *d²* for a combustion-chamber of globular form E' and it is also constructed to form a seat for an air-distributor C'.

The combustion-chamber is surmounted by a cap J consisting of a ring sustained by arms extending from a ring fitting the gas-supply pipe A'.

It will be seen that in our improvement the air for the lamp is taken in at the base of the combustion-chamber and that there is at the base of the lamp an atmospheric injector.

What we claim as our invention, and desire to secure by Letters Patent, is—

1. The combination with a regenerative burner, of a combustion-chamber, a gas-chamber, having a diaphragm, a post connected to and extending downwardly from said diaphragm, an air-distributor projecting into the combustion-chamber, an air-injector communicating with the distributor and located at the base of the combustion-chamber, comprising the part H' provided with radial air-passages and circumferential upwardly-inclined flanges *g¹⁰* and *g¹¹*, the ring *g¹²*, above the part H' having upwardly and downwardly inclined flanges, and the ring D' located above ring *g¹²* having inclined faces, said part H' and rings being connected to and supported by the post extending from the diaphragm, substantially as described.

2. An air-injector for a lamp comprising the part H' provided with radial air-passages and circumferential upwardly-inclined flanges *g¹⁰* and *g¹¹*, the ring *g¹²*, above the part H', having upwardly and downwardly inclined flanges, and the ring D', located above the ring *g¹²*, having inclined faces, substantially as specified.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

THOMAS GORDON.
WILLIAM R. SWIFT.

Witnesses:

S. O. EDMONDS,
WILLIAM M. ILIFF.