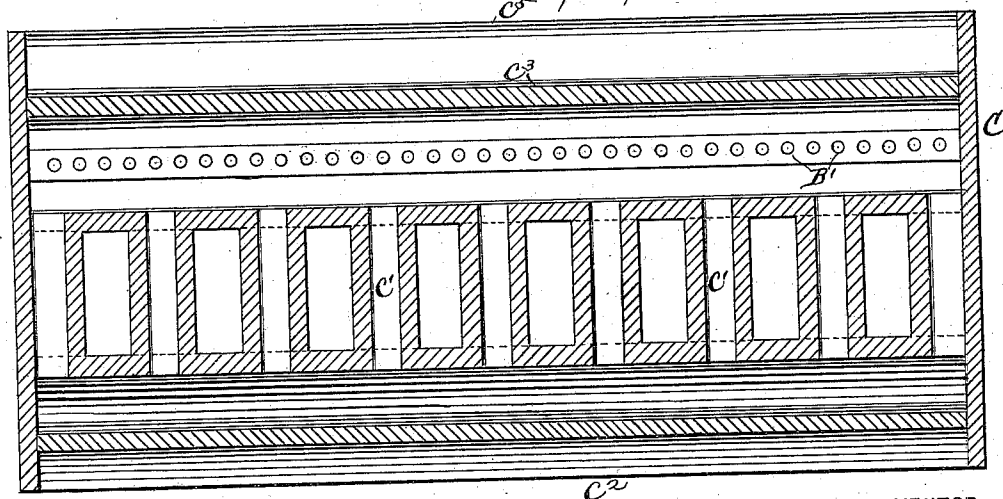
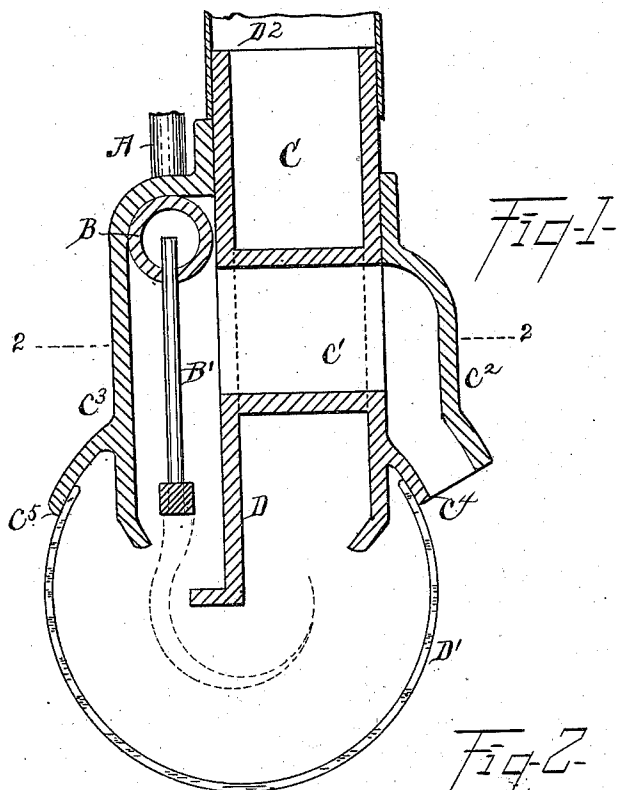


(No Model.)

W. J. SMART.
LAMP.

No. 556,030.

Patented Mar. 10, 1896.



WITNESSES:

Jac. Hermann Jr.
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UNITED STATES PATENT OFFICE.

WALTER J. SMART, OF BROOKLYN, NEW YORK.

LAMP.

SPECIFICATION forming part of Letters Patent No. 556,030, dated March 10, 1896.

Application filed November 15, 1894. Serial No. 528,872. (No model.)

To all whom it may concern:

Be it known that I, WALTER J. SMART, of Brooklyn, in the county of Kings and State of New York, have invented a certain new and useful Improvement in Lamps, of which the following is a specification.

My invention relates particularly to lamps of the regenerative type.

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

In the accompanying drawings, Figure 1 is a transverse section of a lamp embodying my improvement, and Fig. 2 is a horizontal section taken on the line 2 2 of Fig. 1.

Referring by letter to the drawings, A designates a gas-supply pipe leading from any desired source. It communicates with a burner-body B, here shown as of cylindric form and extended in a straight horizontal plane within a casing C, which forms a combustion-chamber, as will hereinafter more fully appear. A straight row of burner-ducts B' extends downward from the burner-body B.

A distinguishing feature of my improvement consists in the use of cross tubes or ducts c' in the casing C, intersecting the waste-flue formed in said casing. The passage of air through these tubes c' causes the air to be heated. Preferably the air will be received under a hood c^2 , which is common to all of the cross-tubes.

D indicates a deflector-plate extended downward in a substantially straight line forward of burner-ducts B'. The deflector-plate extends above and below the ends of said ducts, and it has its lower extremity turned outward or toward the burner-ducts.

I have shown the burner-body B as arranged within the upper portion of a chamber formed by the casing C and a plate-like piece c^3 attached thereto.

D' is a strip of transparent or translucent material made in the form of an arc of a circle and having its edges engaged with lips c^4 c^5 , which are shown as made integral with the parts c^2 c^3 of the casing.

The burner-body is considerably above the

lower ends of the burner-ducts, so that it is not exposed to the heat of the products of combustion. Obviously, however, the burner-body might be lowered so as to bring it within the path of the heated air, if it is desired to more fully heat the gas by means of the heated air.

It will be seen in this improvement that the material D' almost wholly forms a combustion-chamber in which the flame is maintained.

The products of combustion are carried away through a chimney D² extended from the upper end of the casing C, and the plate-like portion c^3 rearward of the ducts B' serves to direct the flame forward.

Having described my invention, what I claim is—

1. The combination with a casing having a series of transverse or cross flues, a hood for directing air thereto, a tubular burner-body extended in a substantially straight line, burner-ducts projected downward therefrom, a combustion-chamber and the deflector extending below the lower ends of the burner-ducts and having its lower portion turned outward toward the burner-ducts, substantially as specified.

2. The combination with a casing having a series of cross-ducts therein, a hood for the reception of air and common to all of said cross-ducts, a burner-body arranged at the upper portion of said ducts, burner-ducts extended downward from said burner-body, the deflector-plate projected above and below the lower ends of said burner-ducts, and a transparent or translucent material formed in the shape of a circle and attached to the casing and forming a combustion-chamber, substantially as specified.

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

WALTER J. SMART.

Witnesses:

ANTHONY GREF,
PIERSON L. WELLS.