

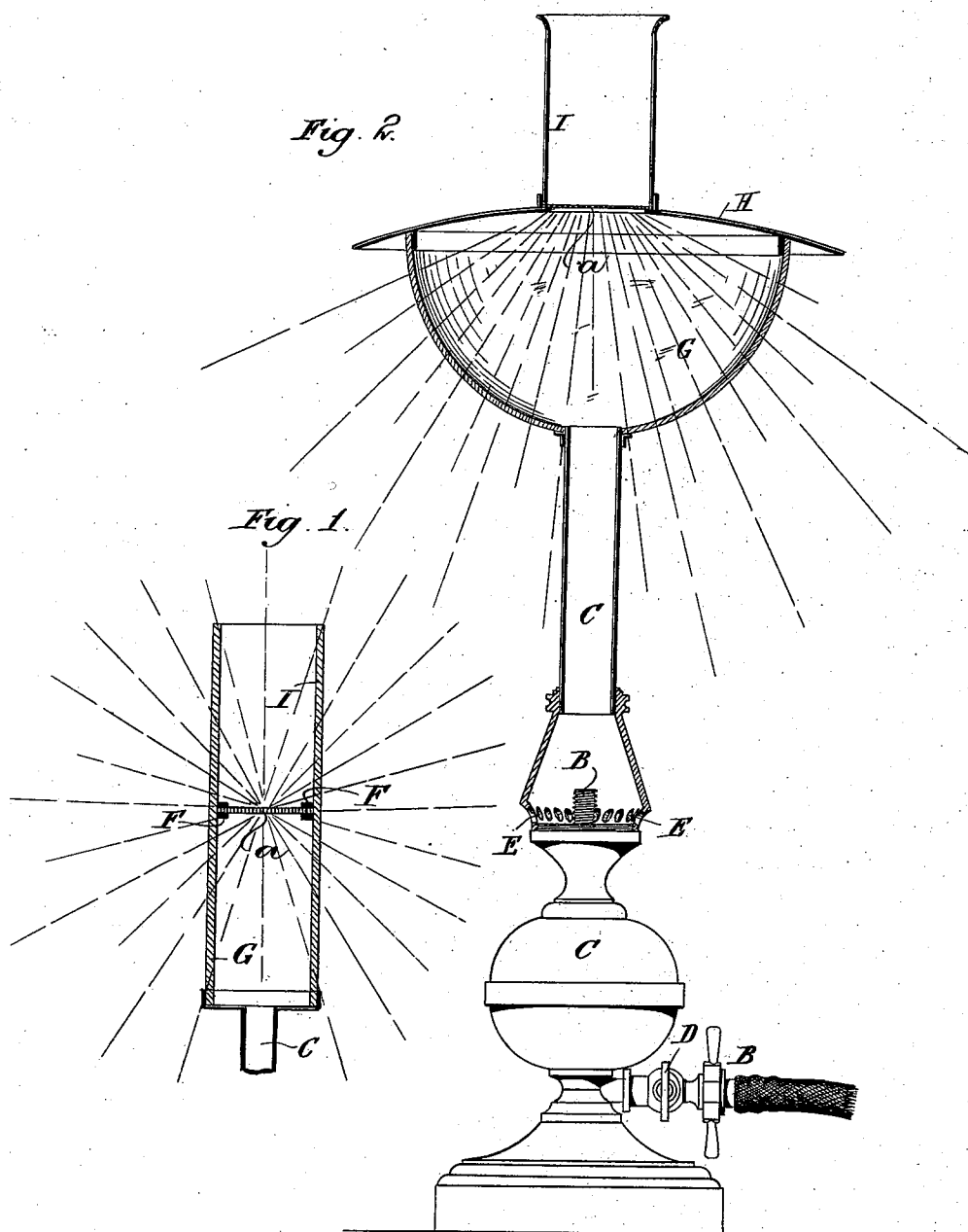
(No Model.)

2 Sheets—Sheet 1.

J. S. SELLON.
INCANDESCENT GAS BURNER.

No. 377,502.

Patented Feb. 7, 1888.



Witnesses:
C. W. Beckmann
J. E. Tasker.

Inventor:
John S. Sellon.
By A. Pollok,
his attorney.

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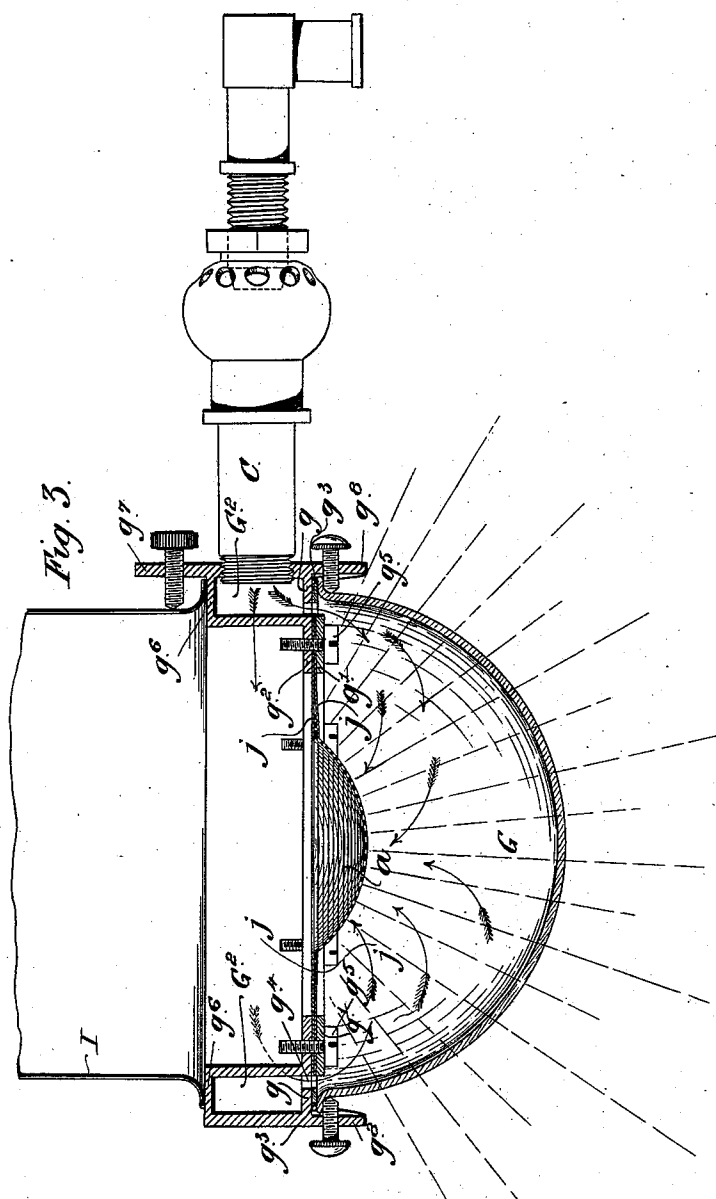
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UNITED STATES PATENT OFFICE.

JOHN S. SELLON, OF HATTON GARDEN, COUNTY OF MIDDLESEX, ENGLAND.

INCANDESCENT GAS-BURNER.

SPECIFICATION forming part of Letters Patent No. 377,502, dated February 7, 1888.

Application filed August 27, 1887. Serial No. 248,060. (No model.) Patented in England January 25, 1887, No. 1,150.

To all whom it may concern:

Be it known that I, JOHN SCUDAMORE SEL-
LON, gentleman, a subject of the Queen of
Great Britain and Ireland, and residing at
5 Hatton Garden, in the county of Middlesex,
England, have invented certain new and useful
Improvements in Incandescent Gas-Burners,
(for which I have applied for a patent in
Great Britain on the 25th of January, 1887,
10 No. 1,150,) of which the following is a specifi-
cation.

My invention has for its principal object to
provide a lamp for burning a mixture of gas
and air in such a manner that the most perfect
15 practical combustion of the gas is effected, and
the lighting effect is obtained in a convenient
and unobstructed manner, the said light being
capable of being given in a downward direc-
tion or all around without practically any im-
20 pediment and with great steadiness.

In order that my invention may be fully un-
derstood, I will describe the same with refer-
ence to the accompanying drawings, premising,
however, that I do not limit myself to the pre-
25 cise forms and arrangements therein illus-
trated, since it will be evident that they may
be considerably varied without departing from
the spirit of my invention.

In said drawings, Figure 1 is a diagram
30 illustrating the simplest form of a lamp con-
structed in accordance with the invention.
Fig. 2 is a vertical section (partly in elevation)
of a table-lamp, and Fig. 3 is a similar view of
another form of lamp embodying the invention.

Referring to Fig. 1, the lamp consists of a
35 glass tube, (or of two glasses placed together
end to end,) G and I. The lower portion, G,
constitutes the mixing-chamber and the upper
part, I, constitutes the chimney. Between
40 them is placed a disk, *a*, of reticulated or per-
forated metal or material, which is capable of
being rendered incandescent. The disk or
piece *a* may be termed the "gauze" or "in-
candescent." In operation a supply of air
45 and gas passes to the chamber G, through pipe
C, and is ignited on the upper side of the gauze
or incandescent *a*. The latter is shown as be-
ing fixed in a ring or frame, F, which may be
made of metal, asbestos, talc, or other incom-
50 bustible material. The radial lines show how
the light from the incandescent gauze *a* is
diffused on all sides.

In Fig. 2, G is the mixing-chamber, to which
gas under ordinary pressure is supplied by a
pipe, B, passing through the column C of the
55 lamp, and being provided with a cock, D, for
regulating, as required, the passage of gas to
the burner. In the column C and below the
top of the gas-pipe B are openings E, through
which air is admitted to the interior of the
60 column to mix with the gas in its passage to
the burner, and the amount of air admitted
may be governed by regulating the size of the
openings by a covering-ring or by regulating
the supply of gas according to its pressure. 65

G is the chamber inclosed by a globe or
glass over the gas and air inlet, which chamber
may be continuous, as a globe, with the excep-
tion of the opening for the gauze; but it is
here shown as a bowl or basin provided with a
70 cover, H, in which the hole for the gauze *a* is
formed, which gauze, when the mixture of gas
and air (admitted to the chamber G and pass-
ing through it) is ignited, becomes incandes-
cent and emits a powerful light, which radiates
75 through the chamber. In order to increase
the light, the under surface of the cover H may
be enameled, silver-plated, or otherwise
treated, so that it constitutes a reflector.

Above the cover H and surrounding the
80 opening in which the gauze *a* is placed there
may be placed a chimney, I, which may be of
any suitable material, transparent or opaque.

Although in the drawings the gas and air are
shown as being supplied from a pedestal, yet
85 they may, if required, be led from above or at
the side, and be admitted to the chamber G at
any suitable point or points beneath the gauze
a, the chamber G serving in all cases as a mix-
ing and heating chamber in which the gas and
90 air are received preparatory to passing into
contact with the gauze *a*.

Fig. 3 illustrates a lamp in which the gas
and air are led in from the side. The gas and
air pipe C enters the side of an annular mix-
95 ing-chamber, G², with flanges *g* and *g*². The
flange at *g* serves for the bearing of the flange
of the globe G, a washer of asbestos, *g*³, inter-
vening. There is a space, *g*⁴, between the
flange and the inner wall of the chamber G²,
100 through which the gas and air pass (as shown
by the arrows) into the chamber G on their
way to the gauze *a*, to be there consumed and
maintain the incandescence of the said gauze,

which is supported between asbestos, tale, or other suitable rings, *j*, secured to the flange *g*² by the ring *g* and screws *g*⁵. The top closure, *g*⁶, of the chamber *G*² serves to support the chimney *I*. The chamber *G*² is formed with lugs *g*⁷ *g*⁸, the former for the screws which secure the chimney and the latter for the screws which secure the chamber *G*.

The gauze *a* may be of any material, metal, or alloy which will stand the heat, and it may be perforated or reticulated, and it may, if so desired, be strengthened, as described in the specification of my application for Patent No. 15,287, of November 23, 1886, or if of metal may have superposed or in any way attached to, inclosed in, or between or interwoven with a material or prepared pieces of any of the earths, oxides, or preparations of metals—such, for instance, as zirconium, lanthanum, cerium yttrium, strontium, barium, thorium, or the like, which can be rendered incandescent and emit light.

Having now described and particularly ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is—

1. A lamp or burner provided with a perforated or reticulated gauze or incandescent placed above a chamber having transparent sides or walls, and provided with an inlet for air and gas, substantially as described.

2. A lamp or burner comprising a chamber having transparent sides or walls, inlets for air and gas to said chamber, a chimney, and a gauze or reticulated piece of refractory material placed across the opening from said chamber to said chimney, substantially as described.

3. The combination of the globe of glass, the annular mixing chamber communicating therewith, and the gauze or incandescent placed across the top of the chamber inclosed by said globe, substantially as described.

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

JOHN S. SELLON.

Witnesses:

JOHN NEWTON,

WM. JOHN WEEKS,

Both of 9 Birchin Lane, London.