

No. 729,516.

PATENTED MAY 26, 1903.

R. STEILBERG.
GAS BURNER.

APPLICATION FILED FEB. 25, 1903.

NO MODEL.

Fig. 1.

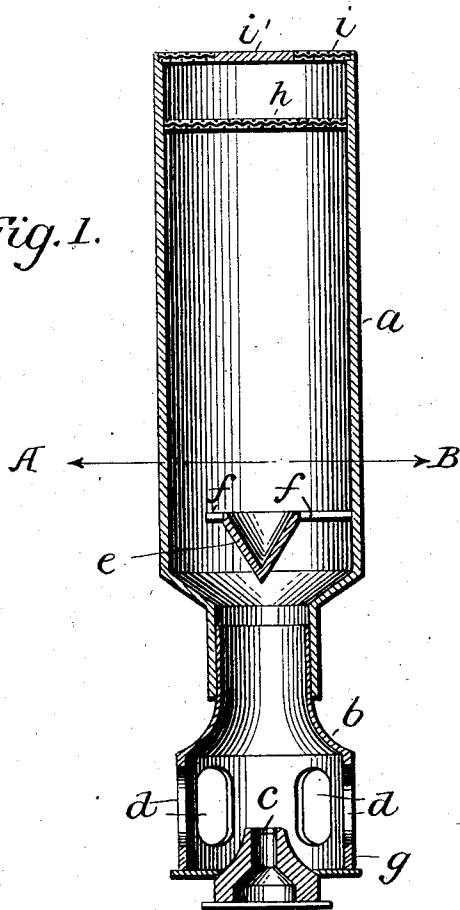
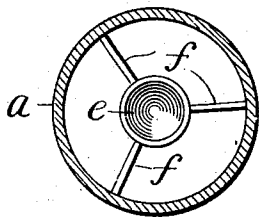


Fig. 2.



Witnesses

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RICHARD STEILBERG, OF CHARLOTTENBURG, GERMANY.

GAS-BURNER.

SPECIFICATION forming part of Letters Patent No. 729,516, dated May 26, 1903.

Application filed February 25, 1903. Serial No. 145,008. (No model.)

To all whom it may concern:

Be it known that I, RICHARD STEILBERG, a citizen of the Empire of Germany, residing at Charlottenburg, in the Empire of Germany, have invented a new and useful Gas-Burner, of which the following is a specification.

My invention relates to an improvement in gas-burners with mixing-tubes in which compressed gas is mixed with atmospheric air sucked; and the object of my improvement is to provide within the mixing-tube a divider or distributor which is closed at its lower part and open at the top, so that a rarefaction of the air in the hollow body is produced by the passage of the compressed gas past the latter, which produces a strong eddying of the air and the gas and an intimate mixture of the same. I attain this object by the arrangement illustrated in a mode of execution in the accompanying drawings, in which—

Figure 1 is a vertical longitudinal section of the burner, and Fig. 2 is a horizontal cross-section through the same on the line A B in Fig. 1.

Similar letters of reference refer to similar parts in both views.

The mixing-tube *a* and the socket-tube *b* have as large a cross-section as possible. Compressed gas or the like enters through the nozzle *c* and draws in the necessary air through the openings *d*.

In the lower part of the mixing-tube *a* a divider *e* is secured in any suitable manner—for instance, by arms *f*. The essential feature of the divider *e* is that it is hollow and closed at its lower part, but open at the top. In the drawings this divider *e* is assumed to be conical; but it can also have any other shape—for example, that of half a ball or otherwise. The mixture of gas and air passing upward through the annular area between the divider *e* and the wall of the mixing-tube *a* produces a rarefaction of the air in the hollow body of the divider *e*. This causes a considerable eddying of the air and gas mix-

ture, whereby the latter becomes a very intimate one.

The mixing-tube *a* is assumed to be provided with a flat sieve *h* and a burning-plate *i*, having a central hole *j*, when the gas and air mixture produced in the above manner will give a flame of high heating power.

It will be understood that the sieve *h* and the burning-plate *i* can also be replaced by other burner-tips. If a suitable incandescent body or socket is used, a light of more than fifteen hundred Hefner candles can be produced. In all cases a thorough mixture of the gas passing out under pressure with the air carried with it is produced by the new divider or distributor *e*. The result is a flame of great heating power and therefore of high lighting efficiency if used with an incandescence body.

I am aware that prior to my invention gas-burners have been made with dividers, and I therefore do not claim such a combination broadly; but

What I do claim as my invention, and desire to secure by Letters Patent, is—

In a gas-burner, the combination with a gas-nozzle, of a socket secured about the discharge end of said nozzle and having a series of air-inlets formed in its side walls, said socket above the air-inlets therein, being reduced in diameter and tapered upwardly, a mixing-tube having a reduced lower portion engaged with the tapered portion of the socket, a burner arranged at the upper wider end of said tube, and a hollow divider arranged within the expanded portion of the mixing-tube, above said socket, and having its end adjacent said socket closed.

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

RICHARD STEILBERG.

Witnesses:

HENRY HASPER,
WOLDEMAR HAUPT.