

No. 729,516.

PATENTED MAY 26, 1903.

R. STEILBERG.
GAS BURNER.

APPLICATION FILED FEB. 25, 1903.

NO MODEL.

Fig. 1.

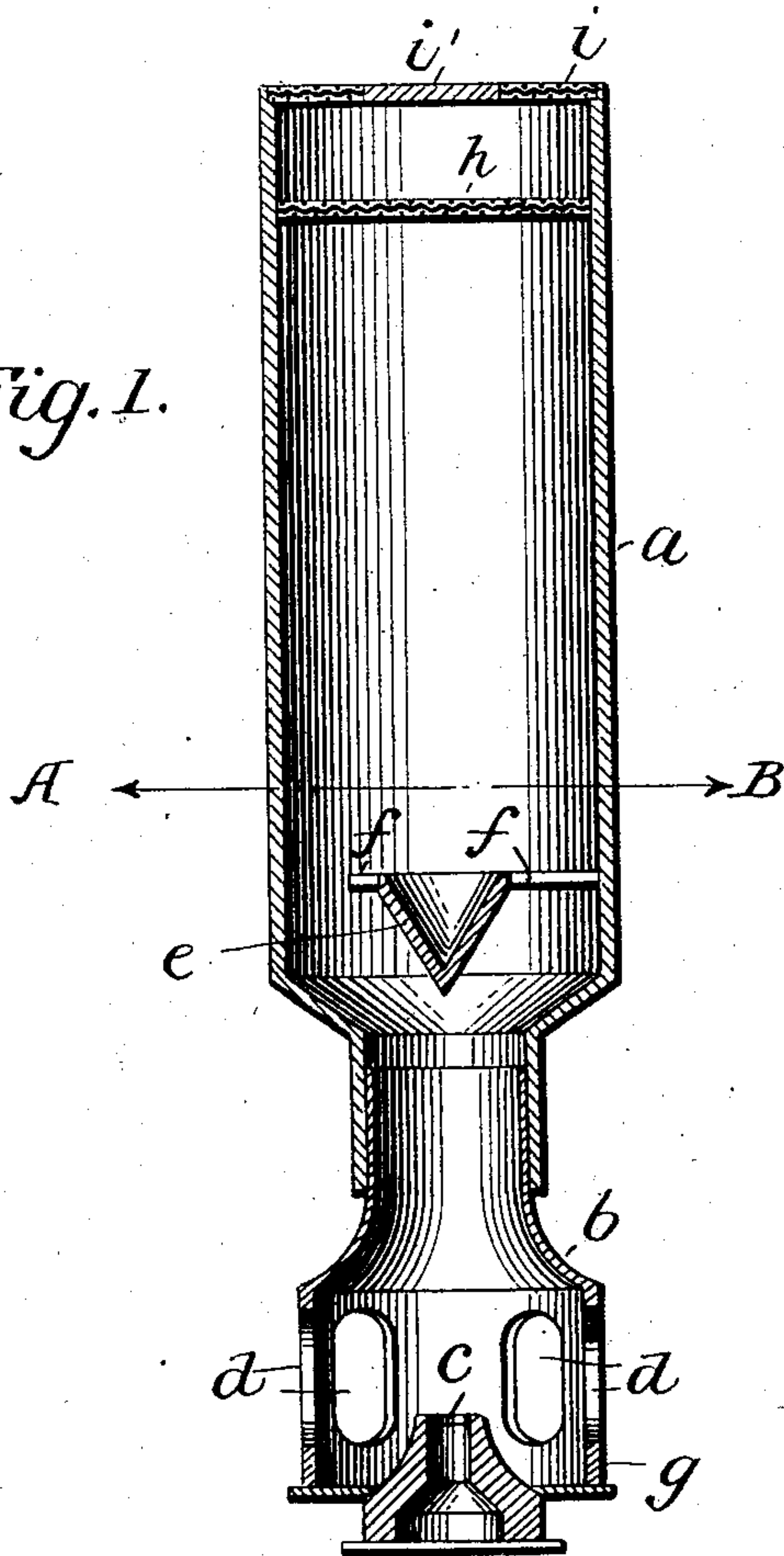
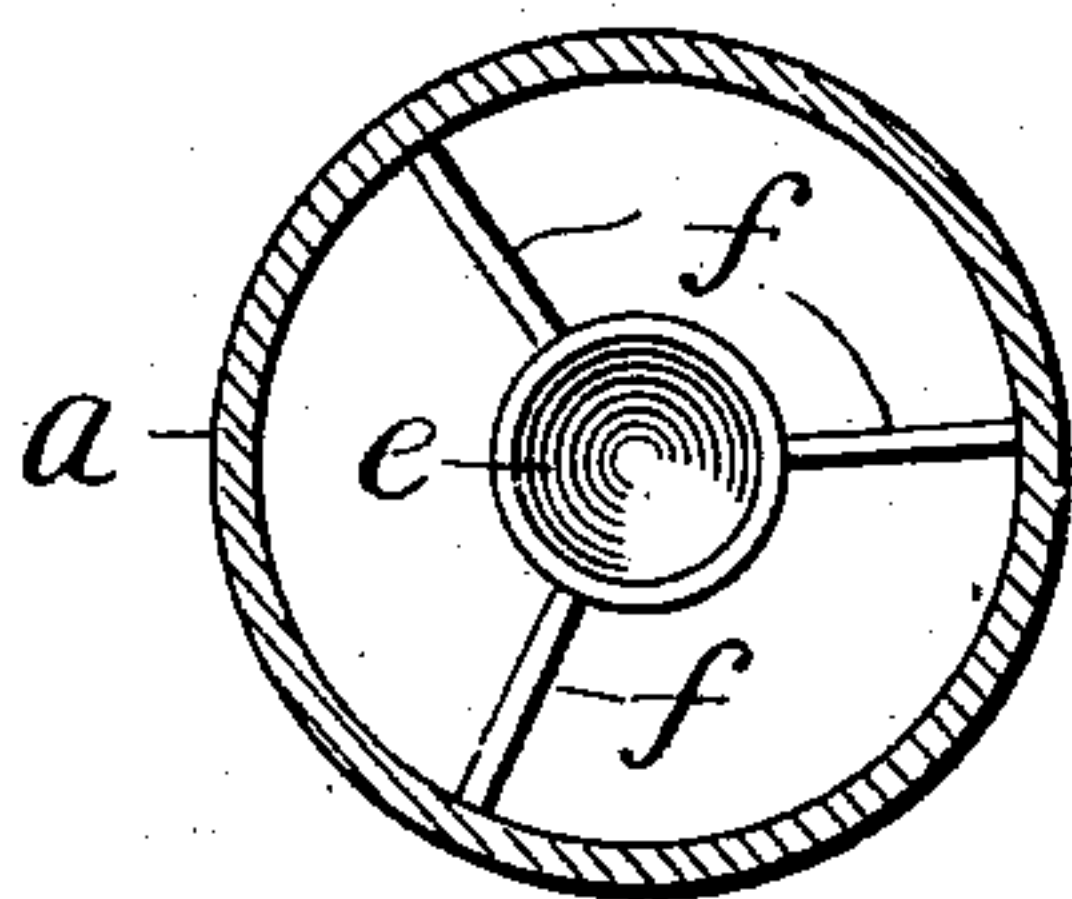


Fig. 2.



Witnesses

J. G. Hinkel

Arthur L. Bryant

By

Richard Steilberg Inventor

Foster Freeman Watson

Attorneys

UNITED STATES PATENT OFFICE.

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 *i'*, 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 incandescent 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.