

No. 776,437.

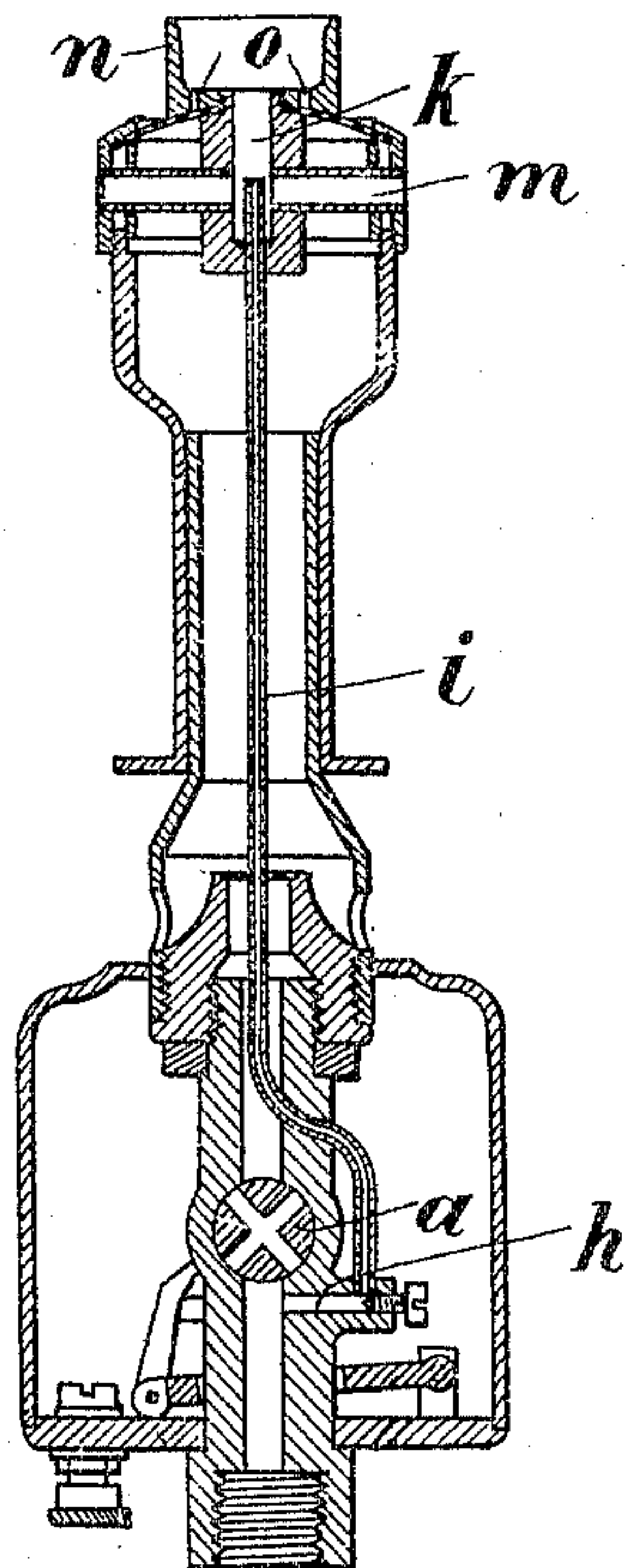
PATENTED NOV. 29, 1904.

F. STIERLI.  
SELF LIGHTING GAS BURNER.

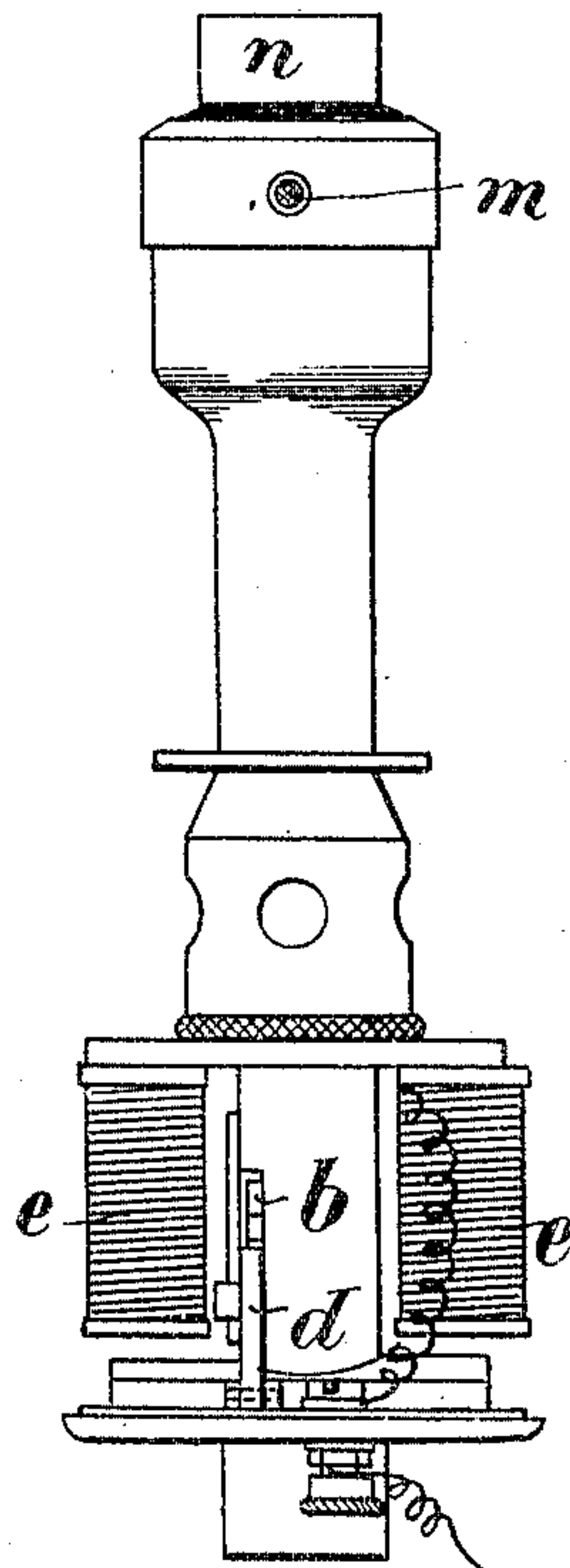
APPLICATION FILED JAN. 19, 1903.

NO MODEL.

*Fig. 1.*



*Fig. 2.*



*Witnesses:*  
*Alfred Bosshardt*  
*Stanley Bramall*

*Inventor*  
*Friedrich Stierli*  
*By F. J. Bosshardt*  
*Attorney.*

# UNITED STATES PATENT OFFICE.

FRIEDRICH STIERLI, OF ZURICH, SWITZERLAND.

## SELF-LIGHTING GAS-BURNER.

SPECIFICATION forming part of Letters Patent No. 776,437, dated November 29, 1904.

Application filed January 19, 1903. Serial No. 139,672. (No model.)

*To all whom it may concern:*

Be it known that I, FRIEDRICH STIERLI, a citizen of the Republic of Switzerland, residing at Zurich, in the Republic of Switzerland, (whose post-office address is 86 Waffenplatzstrasse, Zurich, aforesaid,) have invented new and useful Improvements in and Connected with Self-Lighting Gas-Burners, (for which I have made application for patents in Switzerland, dated June 30, 1902, Nos. 29,363 and 29,495, and in France, dated June 30, 1902, No. 312,036,) of which the following is a specification.

My invention relates to improvements in and connected with self-lighting gas-burners, and has for its object to provide means for preventing the by-pass flame from becoming extinguished through being beaten back, flickering, or back suction. I attain these objects by the mechanism illustrated in the accompanying sheet of drawings, in which—

Figure 1 is a vertical section; Fig. 2, an elevation.

Similar letters refer to similar parts throughout both views.

In carrying out my invention, and referring to the figures generally, I form the plug *a* of the gas-tap for the burner with two ports, which cross each other at a right angle. The gas-supply tube below the said tap is formed with a channel *h*, with which communicates a thin pipe *i*, forming the by-pass leading from the outside to the inside of the gas-supply tube centrally up the burner and into a tube *k*, which latter is cut off from the draft of the burner. In connection with the tube *k* pipes

*m* are arranged which bring the same into communication with the air outside the burner and which at their outer ends are furnished with fine wire-gauze. Above the perforated top or sieve of the gas-burner a cup *n* is employed, the bottom of which has apertures *o* and to the center of which reaches the tube *k*. The gas for the by-pass flame being thus, through the pipes *m*, supplied with air separately from the burner, the by-pass flame is converted into a Bunsen flame and the draft created in the gas-burner when opening the tap cannot extinguish the same. The cup *n* serves to prevent the by-pass flame being extinguished through being beaten back or flickering when extinguishing the main flame. The improved by-pass flame reduces the consumption of gas of the by-pass to a minimum.

The size of the by-pass flame can be regulated by means of the screw-valve in the channel *h*.

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

In an incandescent gas-burner, a by-pass, a tube at the top of the burner into which the said by-pass projects, a sieve on the top of the said tube and a cup thereon having gas-apertures through its bottom around the said tube, all combined substantially as and for the purpose set forth.

In witness whereof I have hereunto set my hand in presence of two witnesses.

FRIEDRICH STIERLI.

Witnesses:

A. LIEBERKNECHT,  
F. LAUENER.