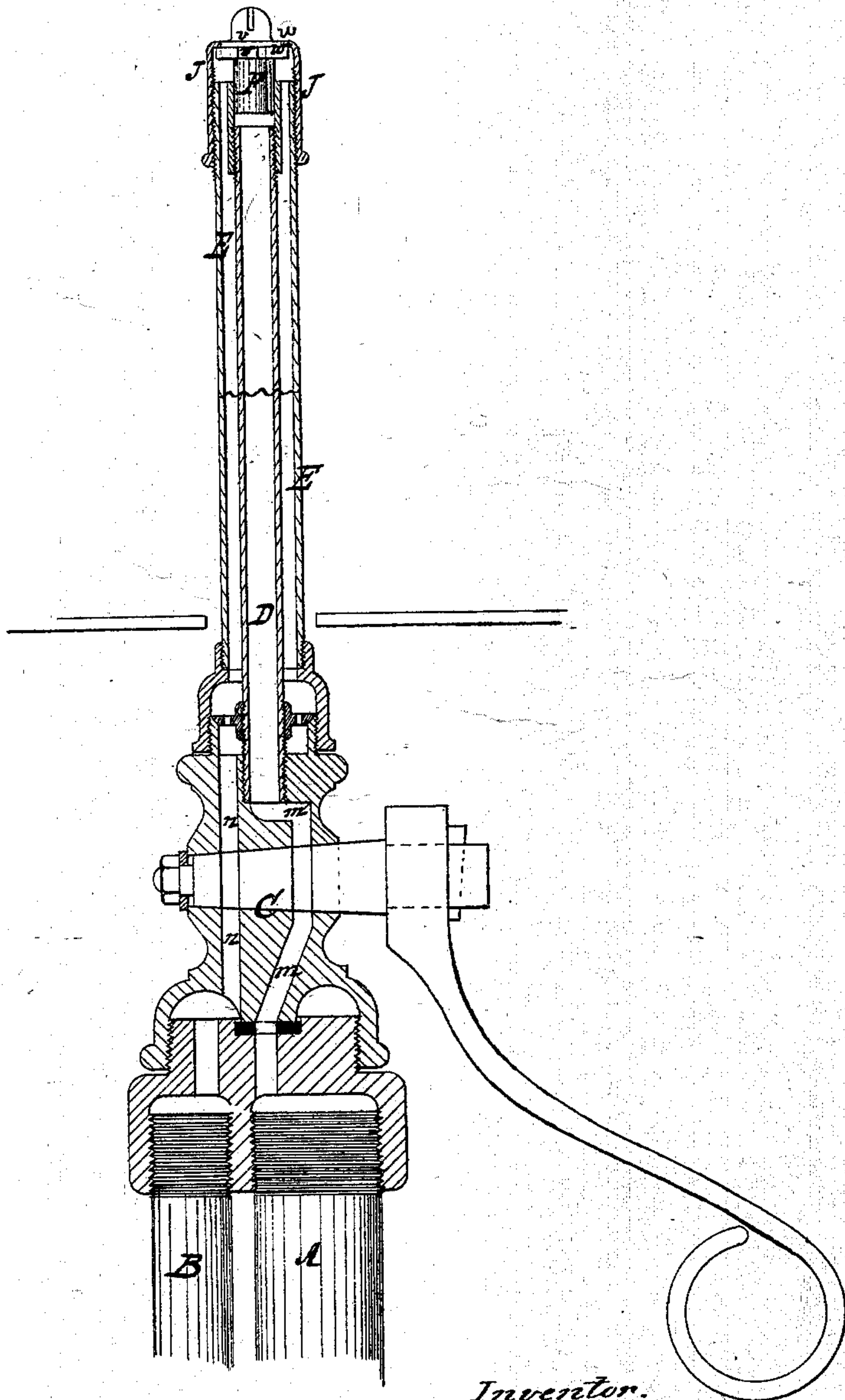


B. ANDREAE.
Gas-Burners.

No. 139,352.

Patented May 27, 1873.



Witnesses.

Christopher Ward
H. Smith

Inventor.

Bernhard Andrae
per Henry E. Roeder
his Attorney.

UNITED STATES PATENT OFFICE.

BERNHARD ANDREAE, OF FRANKFORT-ON-THE-MAIN, GERMANY.

IMPROVEMENT IN GAS-BURNERS.

Specification forming part of Letters Patent No. **139,352**, dated May 27, 1873; application filed January 8, 1873.

To all whom it may concern:

Be it known that I, BERNHARD ANDREAE, of Frankfort-on-the-Main, in the Empire of Germany, have invented certain Improvements in Gas-Burners or Tips for Burning Gas, of which the following is a specification:

The nature of my invention consists in the arrangement of a burner or tip attached to the central pipe through which the illuminating or coal gas passes, in combination with a movable cap fitted over said burner and the outer and concentric pipe through which the oxygen gas is supplied to the flame, and through which said cap the direction of the oxygen gas and the size of the flame can be regulated.

In the accompanying drawing, which represents a section of a gas-burner embodying my invention, A represents a pipe conducting the illuminating coal-gas to the burner, and B the pipe conducting the oxygen to the same. These pipes A and B are attached to a cock, C, constructed with two separate passages, *n* and *m*, communicating with these pipes A and B. To the other end of the cock C a pipe, D, is attached, communicating with the passage *m* through said cock. Outside of this pipe D, and concentric with the same, a pipe, E, is arranged, and attached to the cock C in such a manner that the passage *n* through the

cock C communicates with the concentric space left between the internal pipe D and the external pipe E. On the top of the internal gas-pipe D a burner, F, of metal or soapstone, of the usual construction and shape for coal-gas, is placed, provided with a turned edge or flange, *w*, in which are several incisions, *v*, for the efflux of the oxygen. Over this flange *w* and the end of the external pipe E a cap, J, is screwed, whereby the supply of the oxygen to the burner can be regulated. By the arrangement of this movable cap J the supply of the oxygen gas to the burner or flame can be regulated, and any desired shape or form may be given to the flame by raising or lowering said cap, and the illuminating power of the flame be highly increased.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

A burner or tip, F, provided with a flange, *w*, having incisions *v*, and attached to a central pipe, D, surrounded by a concentric pipe, E, in combination with a cap, J, fitted over the external pipe E, substantially in the manner and for the purpose hereinbefore set forth.

BERNHARD ANDREAE.

Witnesses:

HCH. RUTT,
F. ABT.