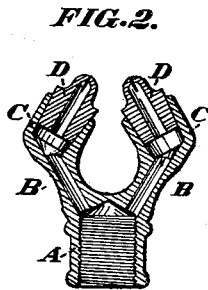
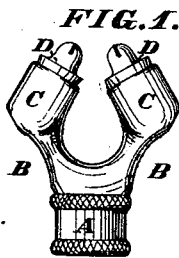


I. COOK.
Gas-Burner.

No. 164,528.

Patented June 15, 1875.



ATTEST:

Robert Burns.
Notary Public

INVENTOR:

Isaac Cook
By Knight Bros.
Attys.

UNITED STATES PATENT OFFICE.

ISAAC COOK, OF ST. LOUIS, MISSOURI, ASSIGNOR OF ONE-HALF HIS RIGHT
TO JACOB R. SPRAGUE, OF SAME PLACE.

IMPROVEMENT IN GAS-BURNERS.

Specification forming part of Letters Patent No. **164,528**, dated June 15, 1875; application filed
January 18, 1875.

To all whom it may concern:

Be it known that I, ISAAC COOK, of St. Louis, St. Louis county, State of Missouri, have invented a certain new and useful Improvement in Gas-Burners, of which the following is a specification:

My improvement relates to a duplex burner and means for obtaining the proper inclination of the "pillars."

Experiment has demonstrated that the angle of impingement of the jets of gas, and the distance between the tips to obtain such impingement, should bear proportion to the pressure of gas in the city where they are used. The pressure of gas in cities varies, and is considerably more than double in some to what it is in other cities; therefore the burners have to be modified to these circumstances. In casting and boring the burners they are not all alike as to this distance between the tips, and so require nice adjustment in most cases after they are otherwise finished, even where the mold is made to exactly suit one city.

My invention is designed to meet this requirement; and consists in making the necks of such burners of thin pliable metal, preferably of soft brass. Burners formed in this manner can be readily adjusted by a fitting-tool, so that a burner for one city can be adjusted to suit another.

In the drawings, Figure 1 is a side view of the burner. Fig. 2 is a longitudinal section at a plane passing axially through both branches of the burner.

A is the screw-socket by which the burner is

attached in the ordinary manner to a pipe or bracket. This socket has at its upper end two thin branches, BB, extending in opposite directions. The top of each branch ends in a pillar, C, forming the socket of the burner-tip D. The tips are preferably of the usual bat-wing form, with slits extending transversely—namely, at right angles with the plane of the section shown in Fig. 2. The tip and pillar upon one side have such inclination in relation to those upon the other side that the jets of gas impinge against each other at an angle of about sixty degrees. The jets of gas are first spread into broad flat flames by the slits of the tips, and will impinge against each other on a line of considerable length, and, by their action on each other, are still more expanded and spread out into a broad thin leaf, in which the oxygenation is very perfect, owing to the extreme thinness and evenness of the flame.

The thin branches or necks B B are made of pliable metal, preferably soft brass, so that by an ordinary fitting-tool the tips can be bendable according to the pressure of gas in the city, so as to obtain the brightest possible light with each burner.

I claim as my invention—

As a new article of manufacture, the duplex gas-burner provided with the thin adjustable necks or branches B B, as and for the purpose set forth.

ISAAC COOK.

Witnesses:

SAML. KNIGHT,
ROBERT BURNS.