

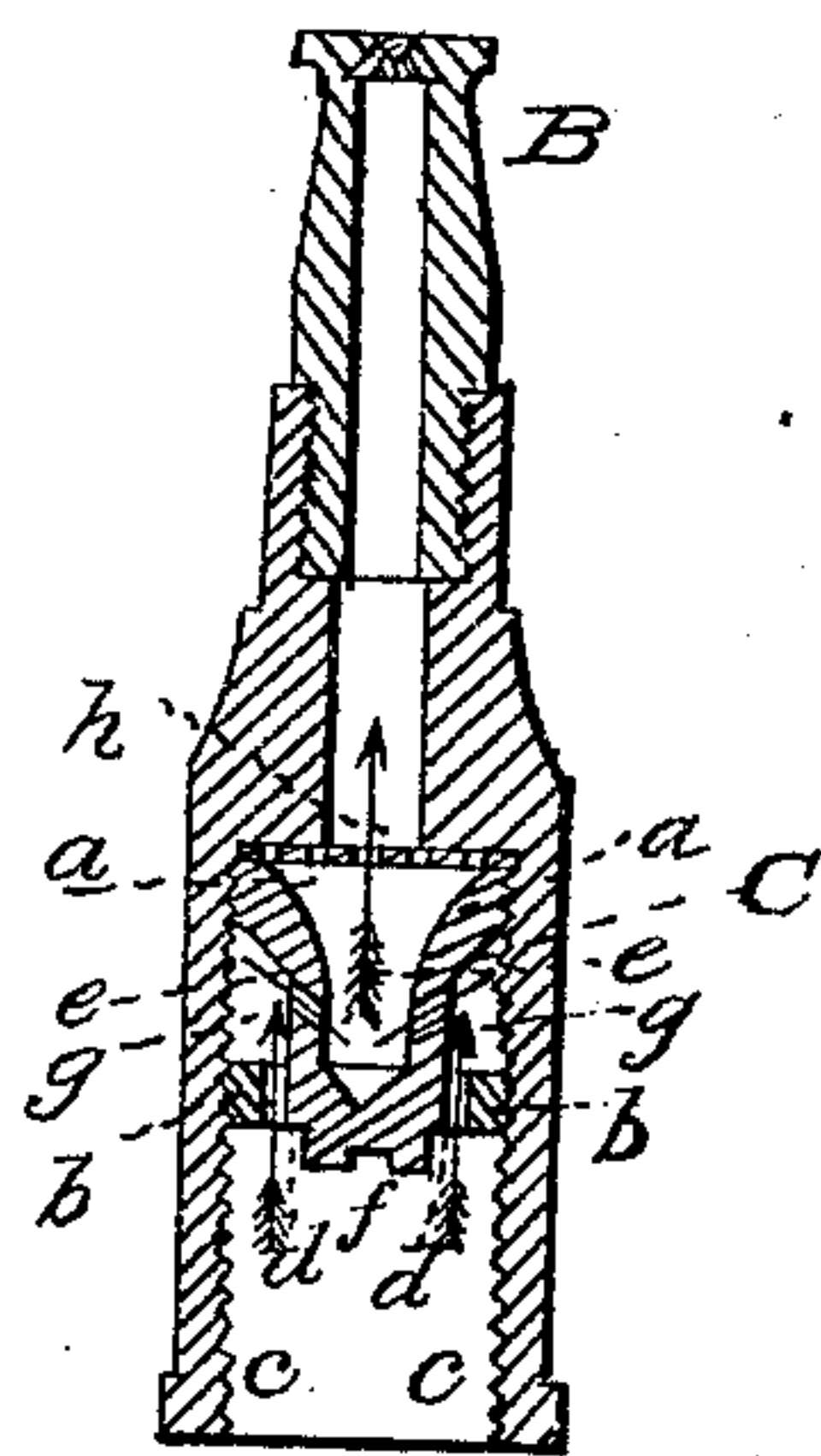
W. WRIGHT.

Gas Burner.

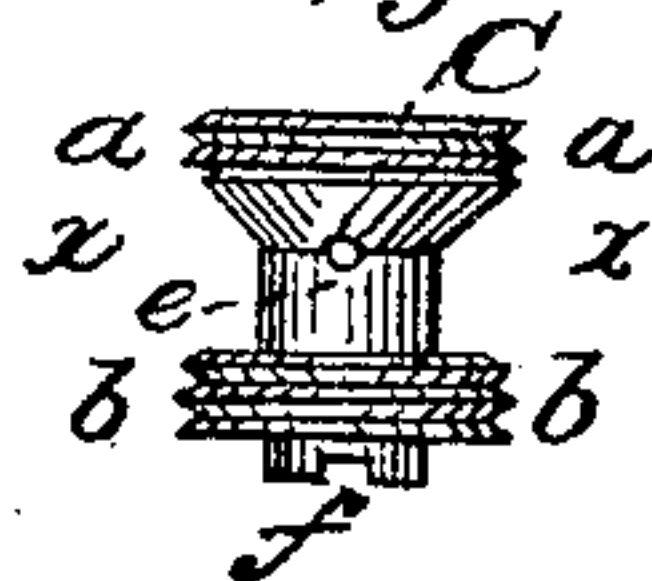
No. 22,609.

Patented Jan. 11, 1859.

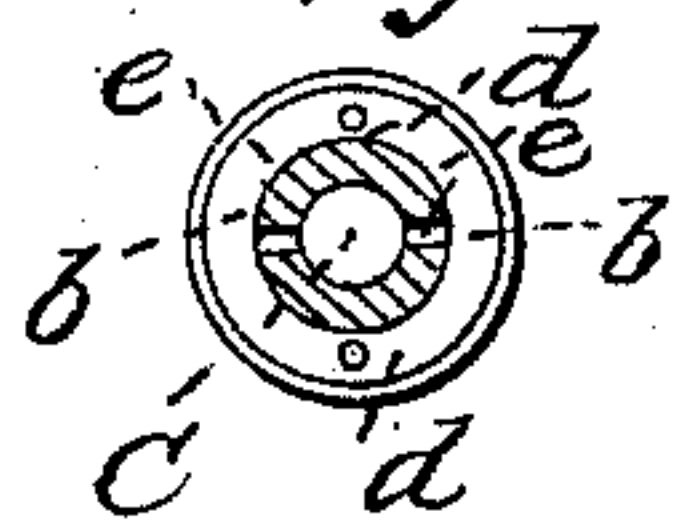
*Fig: 1*



*Fig: 2,*



*Fig: 3.*



# UNITED STATES PATENT OFFICE.

WM. WRIGHT, OF NEW YORK, N. Y., ASSIGNOR TO HIMSELF AND FREDERICK WRIGHT, OF  
SAME PLACE.

## GAS-BURNER.

Specification of Letters Patent No. 22,609, dated January 11, 1859.

*To all whom it may concern:*

Be it known that I, WILLIAM WRIGHT, late  
of St. Louis, State of Missouri, but now of  
the city, county, and State of New York,  
5 have invented a new and useful Improve-  
ment in Gas-Burners; and I do hereby de-  
clare that the following is a full, clear, and  
exact description of the same, reference be-  
ing had to the accompanying drawing,  
10 forming part of this specification, in  
which—

Figure 1 is a vertical section of a burner  
with my improvement. Fig. 2 is a side  
view of the double-flanged perforated cup  
15 which constitutes my invention. Fig. 3 is a  
section of the double-flanged cup in the plane  
shown by the line  $x, x$ , in Fig. 1.

Similar letters of reference indicate like  
parts in all the figures.

20 This invention consists of an improved  
article of manufacture, viz. a gas burner  
provided with a double-flanged cup, having  
openings and otherwise constructed substan-  
tially as hereinafter shown and described.

25 To enable others to make and use my in-  
vention, I will proceed to describe its con-  
struction and operation.

The burner A, B, which I have shown as  
having my invention applied, is of the fish  
30 tail kind. The application of the invention  
is not however limited to that kind, but is  
applicable to any other. The socket A is  
made deeper than is customary in order that  
it may receive the double flanged cup C, and  
35 yet leave depth enough to screw it on to the  
pipe by which it is to be supplied with gas.  
The cup C, has a funnel-shaped interior ter-  
minating at the bottom in a point. It is  
made with two flanges  $a$ , and  $b$ , the former  
40 round the top and the latter near the bot-  
tom; and upon the exteriors of these flanges  
screw threads are cut to fit the screw thread  
 $c$ , which is cut in the socket A, to receive the  
supply pipe. The flange  $b$ , has drilled  
45 through it holes  $d, d$ , whose aggregate area  
is less than the area of the orifice at which  
the gas is consumed, and there are other  
holes  $e, e$ , drilled obliquely through the sides  
of the cup to form a communication from  
50 the space  $g$ , between the flanges  $a, b$ , to the  
interior of the cup, the obliquity of the said  
holes being such as to make them converge  
downwardly, and thus to direct the streams

of gas passing through them from outside  
the cup, down to the bottom thereof. The 55  
holes  $e, e$ , may correspond in size and num-  
ber with those  $d, d$ , but are arranged mid-  
way between them, as shown in Fig. 1. At  
the bottom of the cup C, there is a notch  
 $f$ , to receive a screw-driver by whose aid the 60  
cup is screwed up to the top of the socket A.  
At the top of this socket there is a wire-  
gauze diaphragm  $h$ , but that constitutes no  
part of my invention.

The gas entering the socket of the burner 65  
is intercepted in its upward process by the  
flange  $b$ , and only permitted to pass into the  
space  $g$ , through the holes  $d, d$ . The  
streams passing through the above-men-  
tioned holes are intercepted by the flange  $a$ , 70  
and strike the conical exterior of the cup,  
and are thus deflected or driven back in a  
downward direction and distributed in the  
annular chamber  $g$ , whence the only outlet  
is through the descending holes or passages 75  
 $e, e$ , into the interior of the cup. The  
streams passing through  $e, e$ , meet each  
other at the bottom of the cup and tend to  
intercept each other and hold each other  
back before they are allowed to slowly min- 80  
gle within the cup and pass upward to the  
burner. The interception of the gas by  
the flange  $b$ , again by the flange  $d$ , and after-  
wards by the streams passing down through  
 $e, e$ , and striking each other within the 85  
conical chamber bottom of the cup C, causes  
a most effectual reduction of any excessive  
or undue pressure that it may have had on  
entering the lower part of the socket of the  
burner; and the emission of gas from the 90  
burner is thereby in a great degree equalized  
and its consumption is economized. This  
double flanged cup differs from the many  
contrivances used for intercepting and giv-  
ing a circuitous direction to gas in burners 95  
for the purpose of reducing undue pressure  
more particularly in its causing separate  
streams of gas to intercept one another by  
striking one another in a downward direc-  
tion by being caused to issue from suitably 100  
directed oblique passages  $e, e$ , which action  
I find produces a very important effect.

I do not claim the reduction of excessive  
pressure in gas-burners by so constructing  
the burners as to cause the gas to be inter- 105  
cepted and divided into small streams and

to pass in a circuitous direction; as I am aware that there are many gas-burners so constructed; but

I claim and desire to secure by Letters  
5 Patent, as an improved article of manufacture—

A gas burner provided with a double

flanged cup C, having openings (*d, d, e, e*) and otherwise constructed substantially as herein shown and described.

WILLIAM WRIGHT.

Witnesses:

WM. TUSCH,  
L. F. COHEN.