

(No Model.)

2 Sheets—Sheet 1.

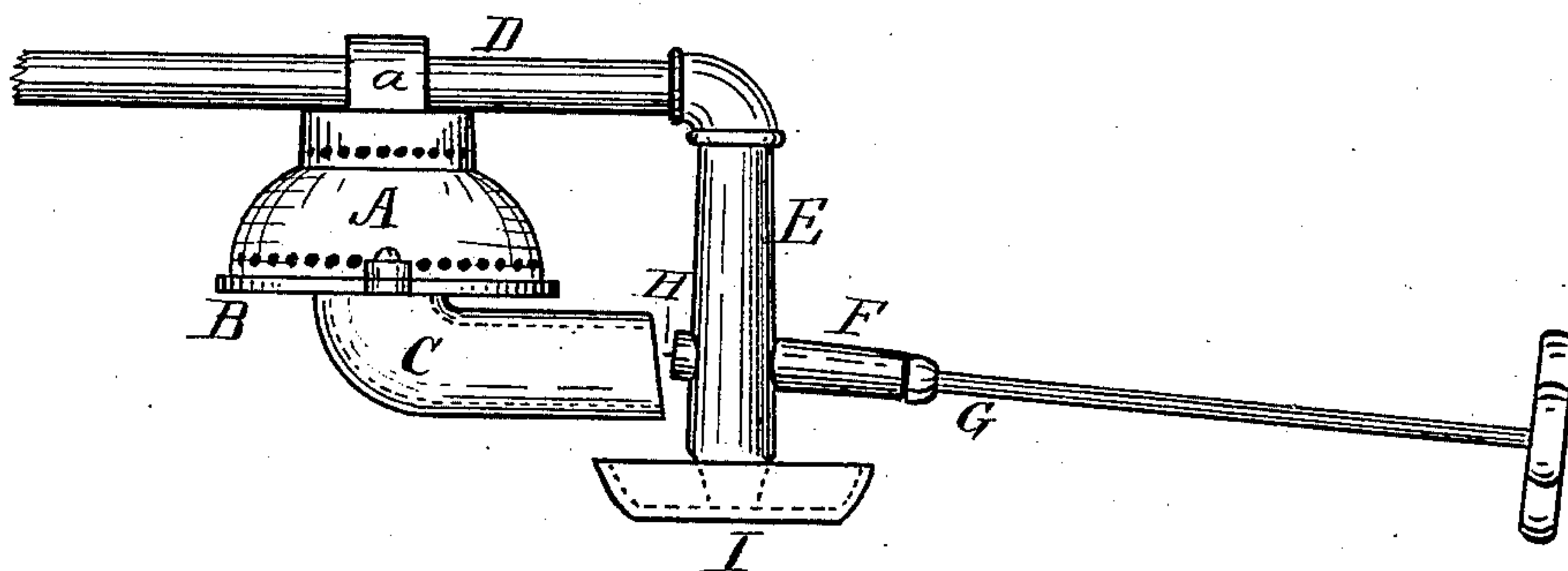
H. BORN & W. H. DUNSHA.

VAPOR BURNER.

No. 246,063.

Patented Aug. 23, 1881.

*Fig. 1.*



*Witness*  
*A. B. Allen.*  
*Frank R. Tibbitts.*

*Inventors:*  
*Henry Born*  
*William H. Dunsha*  
*by Geo. W. Tibbitts atty.*

(No Model.)

2 Sheets—Sheet 2.

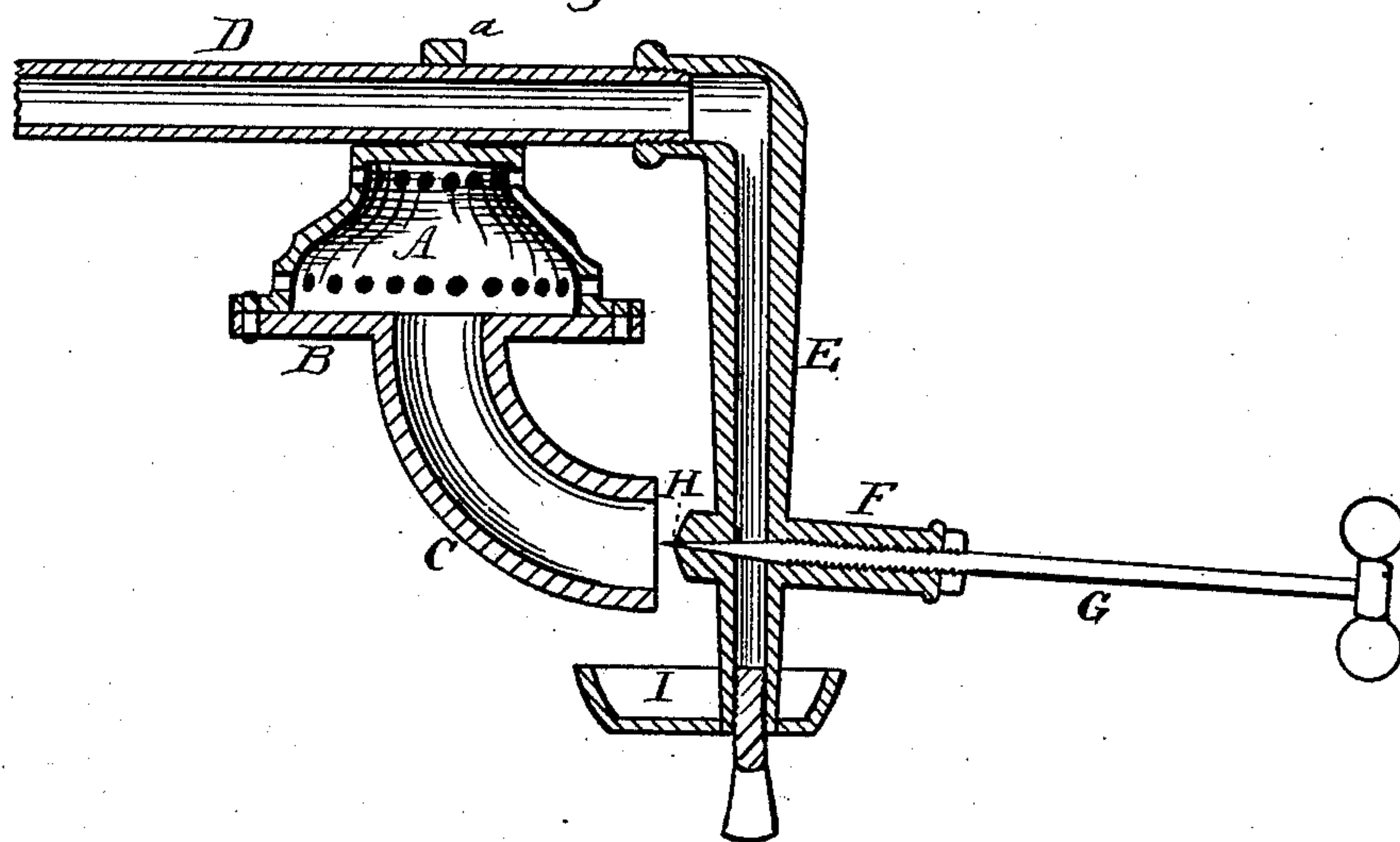
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*Fig. 2.*



*Witness*

*A. B. Allen*

*S. R. Tibbitts*

*Inventors:*

*Henry Born*

*Wm H Dunsha*

*By Geo. W. Tibbitts atty-*

# UNITED STATES PATENT OFFICE.

HENRY BORN AND WILLIAM H. DUNSHA, OF CLEVELAND, OHIO; SAID  
DUNSHA ASSIGNOR TO SAID BORN.

## VAPOR-BURNER.

SPECIFICATION forming part of Letters Patent No. 246,063, dated August 23, 1881.

Application filed April 13, 1881. (No model.)

*To all whom it may concern:*

Be it known that we, HENRY BORN and WILLIAM H. DUNSHA, both of Cleveland, in the county of Cuyahoga and State of Ohio, have invented a new and useful Vapor-Burner, of which the following is a specification.

In the accompanying drawings, Figure 1 is a side elevation, and Fig. 2 a vertical section, of our improved burner.

The nature and objects of this invention will appear in the subjoined description when considered with reference to the accompanying drawings.

A is a perforated cap setting onto and secured to a disk or plate, B, to the under side of which depends a curved pipe, C, having an open end and communicating with the interior of the said cap A. The top of cap A is provided with a loop, *a*, through which is inserted a pipe, D, to one end of which depends an arm, E, provided with a branch, F, into which is screwed a needle-valve stem, G, for controlling a jet-orifice, H, that is located opposite to the open end of the curved pipe C. The lower end

of arm E has attached a heater-cup, I. The branch F is made at a slight angle to the arm E, to direct the vapor upward into pipe C. The pipe D comprises the generating-chamber, and is heated by the flames of the burner.

The operation of this is as follows: The vapor is injected into the mouth of the curved pipe C, and induces a current of air to enter with it, and is oxygenized therein and conveyed to the burner A.

This makes a very cheap, simple, and efficient vapor-burner.

Having described our burner, we claim—

In combination with the perforated cap A, disk B, and curved pipe C, the pipe D, passing over said cap and attached thereto, and having the depending arm E, with its branch F, the needle-valve G, and jet-orifice H, as shown and described.

HENRY BORN.

WILLIAM H. DUNSHA.

Witnesses:

GEO. W. TIBBITTS,  
F. C. GALLUP.