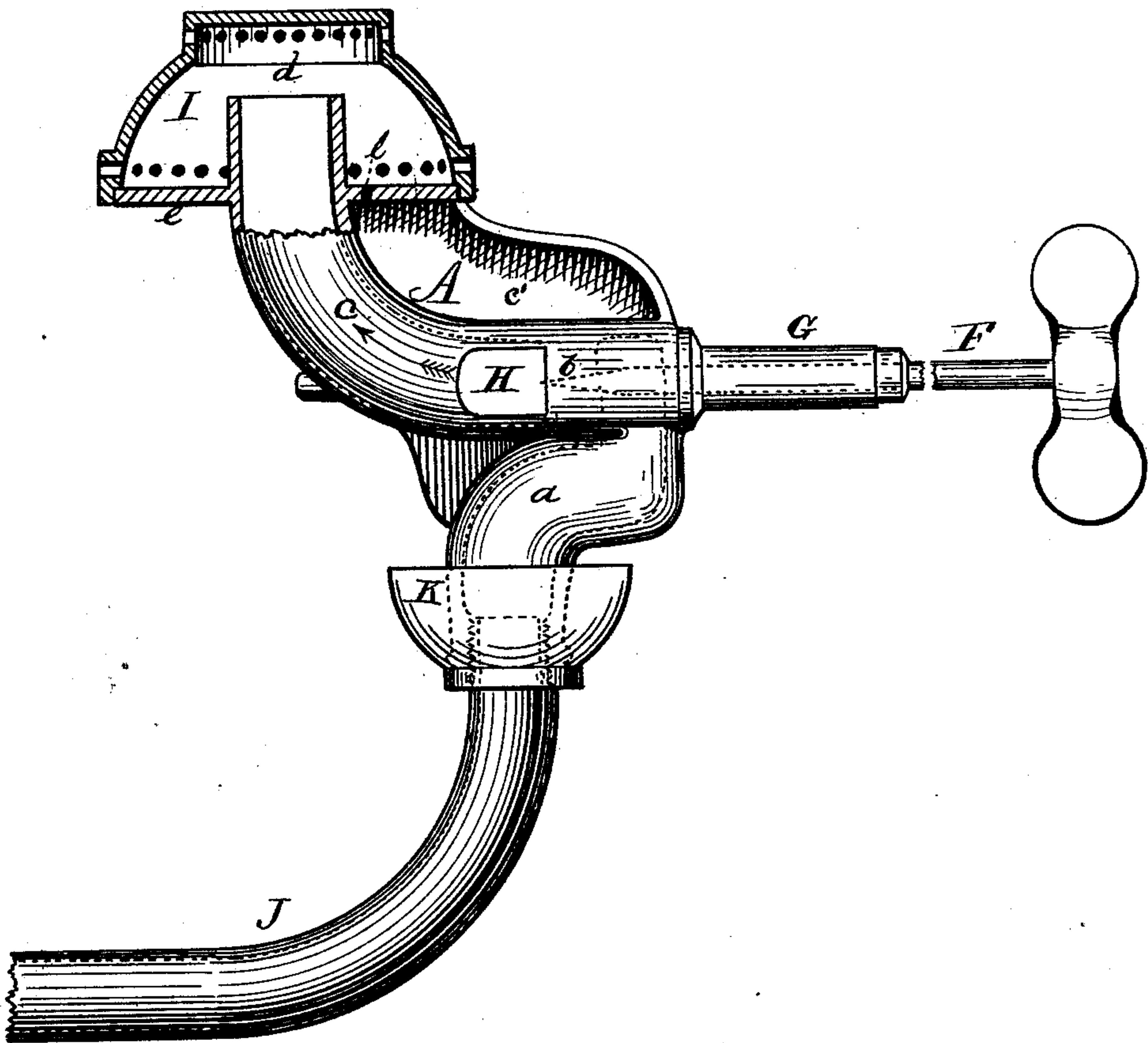


F. MARQUART.  
Vapor-Burner.

No. 220,929.

Patented Oct. 28, 1879.



*Attest;*  
*Frank R. Tibbitts*  
*C. S. O'Connor*

*Inventor;*  
*Frederick Marquart.*  
*By Geo. W. Tibbitts Atty.*

# UNITED STATES PATENT OFFICE

FREDERICK MARQUART, OF CLEVELAND, OHIO.

## IMPROVEMENT IN VAPOR-BURNERS.

Specification forming part of Letters Patent No. 220,929, dated October 28, 1879; application filed September 6, 1879.

*To all whom it may concern:*

Be it known that I, FREDERICK MARQUART, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Gasoline-Burners, which improvements are fully set forth in the following specification and accompanying drawing, which is a side elevation, portions being in section, to show internal structure.

The object of this invention is the production of a gasoline-burner consisting of two quarter-curve chambers, having at their intersection a valve-seat and socket for the valve-stem, arranged so as to have the valve-stem stand in a horizontal position, the lower of the two chambers comprising the vapor-generating chamber, the upper or other chamber being provided with openings for the admission of air, and comprises the tube for leading the vapor to the mixing-chamber in the cap or dome.

The invention consists in the combination of the above-stated devices with a valve-stem, heater-cup, and perforated dome, as hereinafter described and claimed.

In the drawing, A represents a casting, comprising the main and essential parts of the burner, consisting of the vaporizing-chamber *a*, the valve-seat and jet-orifice *b*, the pipe *c*, leading to the mixing and combustion chamber *d*, which pipe also supports the base-plate *e*. These are cast in one piece, as shown, and in the form seen in the drawing—that is, the chamber *a* in a quarter-curve, and the pipe *c* in a quarter-curve, with valve-seat and jet-orifice interposed at the junction of the two curves in such a manner that the valve-stem F shall be in a horizontal line, there being cast with the said piece A a projection, G, into which the said valve-stem is screwed.

The space for the chamber *a* is shown by dotted lines, as also is the space in the pipe *c*. The valve-point is also represented in dotted

lines. An opening, H, is made through the pipe *c* at the point where the jet-orifice is located for supplying air to the vapor as it issues therefrom.

The burner is supplied with a cap or dome, I, of the usual pattern. At the junction of the piece A with the supply-pipe J is placed a cup, K, for use in starting the burner, which is performed in the usual manner.

Two small jets, *l l*, are made through the base-plate *e*, one on each side of the rib *e'*, for heating the metal for keeping up the generation of vapor.

The operation of this is as follows: A portion of gasoline is allowed to flow through the jet-orifice and fall into the cup K, and is there burned for heating the chamber *a*. This being done, the vapor is then allowed to escape through the said orifice by opening the valve, and is conveyed by the curved pipe *c* into the chamber *d*, in the direction indicated by the arrow, and there consumed.

By this method of construction there is but one joint, and that is at the connection of the piece A with the supply-pipe; consequently the liability to leakage is overcome; and the valve-stem is arranged, in connection with the burner, in a most convenient manner for handling, and to prevent its becoming heated or liable to leak.

Having described my invention, I claim—

The piece A, consisting of the curved chamber *a*, the valve-seat and jet-orifice *b*, curved pipe *c*, provided with openings H, and having the base-plate *e*, all cast in one piece, in the form shown, in combination with valve-stem F, cup K, and cap or dome I, substantially as and for the purpose specified.

F. MARQUART.

Witnesses:

GEO. W. TIBBITTS,  
ALFRED ELWELL.