

J. H. BEAN.  
GASOLINE BURNER.

No. 186,784.

Patented Jan. 30, 1877.

Fig. 1

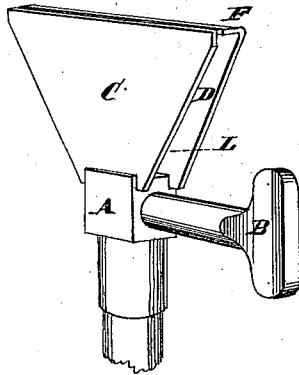


Fig. 2

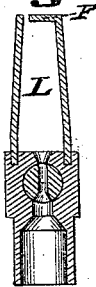


Fig. 3

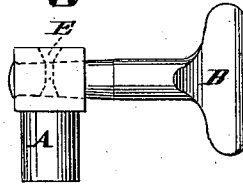
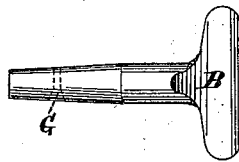


Fig. 4



Attest

*John L. Wilkes*

*H. N. Pruden,*

Inventor

*Joseph H. Bean*

# UNITED STATES PATENT OFFICE.

JOSEPH H. BEAN, OF CINCINNATI, OHIO.

## IMPROVEMENT IN GASOLINE-BURNERS.

Specification forming part of Letters Patent No. **186,784**, dated January 30, 1877; application filed December 2, 1876.

*To all whom it may concern:*

Be it known that I, JOSEPH H. BEAN, of Cincinnati, in the county of Hamilton and State of Ohio, have invented a new and useful Improvement in Gasoline-Burners; and I do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

This invention relates to that class of burners known as "self-generating gas-burners;" and consists in certain peculiarities of construction, for the purpose of adapting it to use on the ordinary lamp where a wick is used for raising the fluid to the burner by means of capillary attraction alone.

The drawings represent what is known as an open or "bat-wing burner," and it is so constructed that it will produce a beautiful, brilliant, and steady light without the use of an elevated tank of gasoline, as is ordinarily used. The lighting is done by application of heat to the burner.

In the drawings, Figure 1 represents a perspective view of my improved burner; Fig. 2, a sectional elevation of the same; and Figs. 3 and 4 views of the body of the burner and shut-off key.

To enable others skilled in the art to make and use my invention, I will now proceed to describe fully its construction.

A represents the body of my burner, through which passes the shut-off key B, and from which rise the two elevated lips C and D, the lower portion of it being bored out to fit the wick-tube of the ordinary gasoline-lamp. From this excavated portion is drilled a small opening upward, terminating between the lips C and D, and is enlarged at its extreme upper end, as shown at E, Fig. 3, for a specified purpose, which will be explained hereafter. Across this opening is drilled the opening for the shut-off key B, as shown. From the rear of A rises the lip D, which may be cast with A, or otherwise fastened to the same. The upper edge of the lip D is bent squarely forward, as shown at F.

This bent or projecting portion serves a very important part in spreading the flame and burning the smoke.

To the front of A is attached, in any convenient way, the straight lip C, which rises

to the same height as the lip D, and is made to stand a short distance from it, as shown in Fig. 2.

This forms a chamber with open ends and top for a complete and thorough mixing of the gas and air, and out of the top of which the flame rises in a broad clear sheet.

This front lip serves the double purpose of giving an upward direction to the flame and of protecting it from the effects of the wind, giving to the flame great tenacity and endurance, which is of great importance in carrying lamps, and where burners are used, in the open air.

B is a key, ground into the body A in the ordinary way, and secured in any suitable manner. Through this key is drilled a small hole, terminating at the upper side in a small needle-pointed opening, as shown at G, Fig. 4. This needle-point is made to open or close at will, and to allow the gas as generated to pass with great force through the opening E, which, as has been explained, is enlarged at its upper end for the special purpose of allowing the jet of gas, by the turning of the key, to be thrown forward or backward for the purpose of changing the shape or position of the flame, as the gas may be poorer or richer at times, so as always to produce a perfect flame. The key B is also used for extinguishing the flame.

When we take into consideration the danger of a tank of gasoline elevated above the flame, and the great necessity of a safe and satisfactory open burner for the ordinary lamp, the value and advantages of this construction can and will be appreciated.

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

The gasoline-burner as described, with the lips C and D, body A, chamber L, needle-pointed opening *g*, enlarged top opening *e*, and key B, constructed in the manner and for the purpose set forth.

In testimony of which invention I hereunto set my hand and seal on the 29th day of November, 1876.

J. H. BEAN. [L. s.]

Witnesses:

JOHN F. WILTSEE,  
W. H. PRUDEN.