

(No Model.)

H. S. BELDEN.

VAPOR BURNER FOR LIGHTING PURPOSES.

No. 306,125.

Patented Oct. 7, 1884.

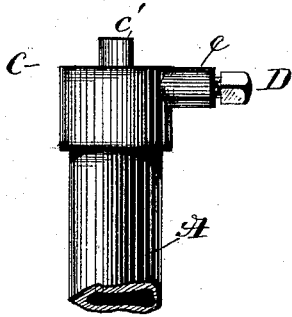


Fig. 1.

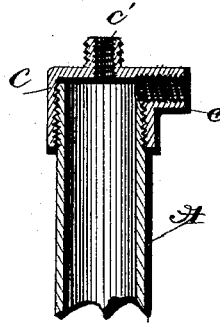


Fig. 2.

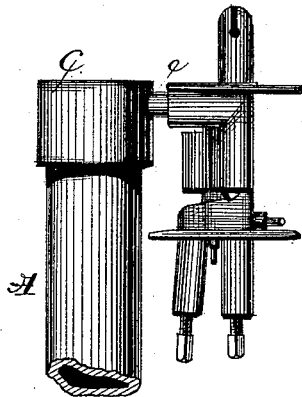


Fig. 3.

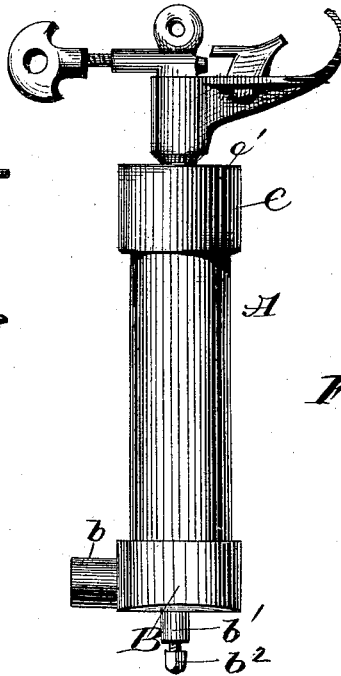


Fig. 4.

Henry S. Belden.

WITNESSES

INVENTOR

Wm. M. Moore  
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Leggett and Leggett, ATTORNEYS

# UNITED STATES PATENT OFFICE.

HENRY S. BELDEN, OF CANTON, OHIO.

## VAPOR-BURNER FOR LIGHTING PURPOSES.

SPECIFICATION forming part of Letters Patent No. 306,125, dated October 7, 1884.

Application filed December 17, 1883. (No model.)

*To all whom it may concern:*

Be it known that I, HENRY S. BELDEN, of Canton, in the county of Stark and State of Ohio, have invented certain new and useful  
5 Improvements in Vapor-Burners for Lighting Purposes; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make  
10 and use the same.

My invention relates to an improvement in vapor-burners for lighting-purposes, the object of the same being to provide a large and improved vaporizer to which may be attached  
15 a supply-pipe and any ordinary burner, such as are used with atomizers.

With this end in view my invention consists in a vaporizing-tube having a removable cap provided with a lateral opening and an end opening, and a plug for closing one of said openings while the other is in use.

In the drawings, Figure 1 is an elevation, and Fig. 2 a vertical section, of the upper portion of my device. Fig. 3 is an elevation of  
25 the upper part of my device with a side burner attached. Fig. 4 is an elevation of the entire device and with a vertical burner attached.

A represents a tube of considerable size constituting the body of the device and inclosing the vaporizing-chamber, and is provided at  
30 the bottom with the screw-cap B, that has the boss *b*, that is threaded for receiving a supply-pipe. The cap is also provided with the boss *b'*, the opening in which is threaded and secured by the plug *b''*, and is for discharging  
35 matter from the vaporizing-chamber.

To the upper end of the tube A is attached the screw-cap C, that is provided with the boss *c*, extending laterally, and threaded for  
40 the attachment of a side burner. A boss, *c'*, is provided, extending upward from the cap C, and threaded for attaching a vertical burner. As but one burner is used at the same time, a plug, D, is provided, that will fit either  
45 boss *c* or *c'*, and by which the orifice in the boss that is not in use may be closed.

The construction aforesaid—to wit, a tube with screw-caps—is for convenience in manufacturing and for easy access to the chamber.

The entire device might be made in one  
50 piece, and the chamber and orifice cored, if so desired.

Heretofore atomizers have been used between the supply-pipe and burner, and provided with packing to prevent a back current that would extinguish the light, which,  
55 without the packing, would be extinguished when the gasoline or other fluid used came in contact with overheated parts, thereby causing a sudden and rapid vaporization.

With my improved vaporizing-chamber no packing is required, and there is so much room for the expansion of the gas as to prevent excessive pressure by a momentary increase in the vaporization, and the small orifice where the feed-pipe enters the vaporizing-chamber presents such a small space for the gas to act upon as compared with the capacity of the chamber that a back-draft, such as would extinguish the light, is prevented.

Heretofore the great number of devices of this class that were in use rendered it difficult when repairs were necessary to obtain the parts required.

My invention is intended to supply this want by furnishing a vaporizing-chamber and attachments that may be used with any kind of burner, horizontal or vertical, and that may be placed on the market like lamp-chimneys to supply the wants of all.

The part *c* (shown in Fig. 3) may be of any length, and is preferably made somewhat larger than shown in the drawings.

What I claim is—

A vaporizing-tube provided at its upper  
85 end with a removable cap, the latter provided with a lateral opening and an end opening, and a plug for closing one of said openings while the other is in use, substantially as set forth.

In testimony whereof I sign this specification, in the presence of two witnesses, this 13th day of December, 1883.

HENRY S. BELDEN.

Witnesses:

GEO. E. BALDWIN,  
F. W. HAACK.