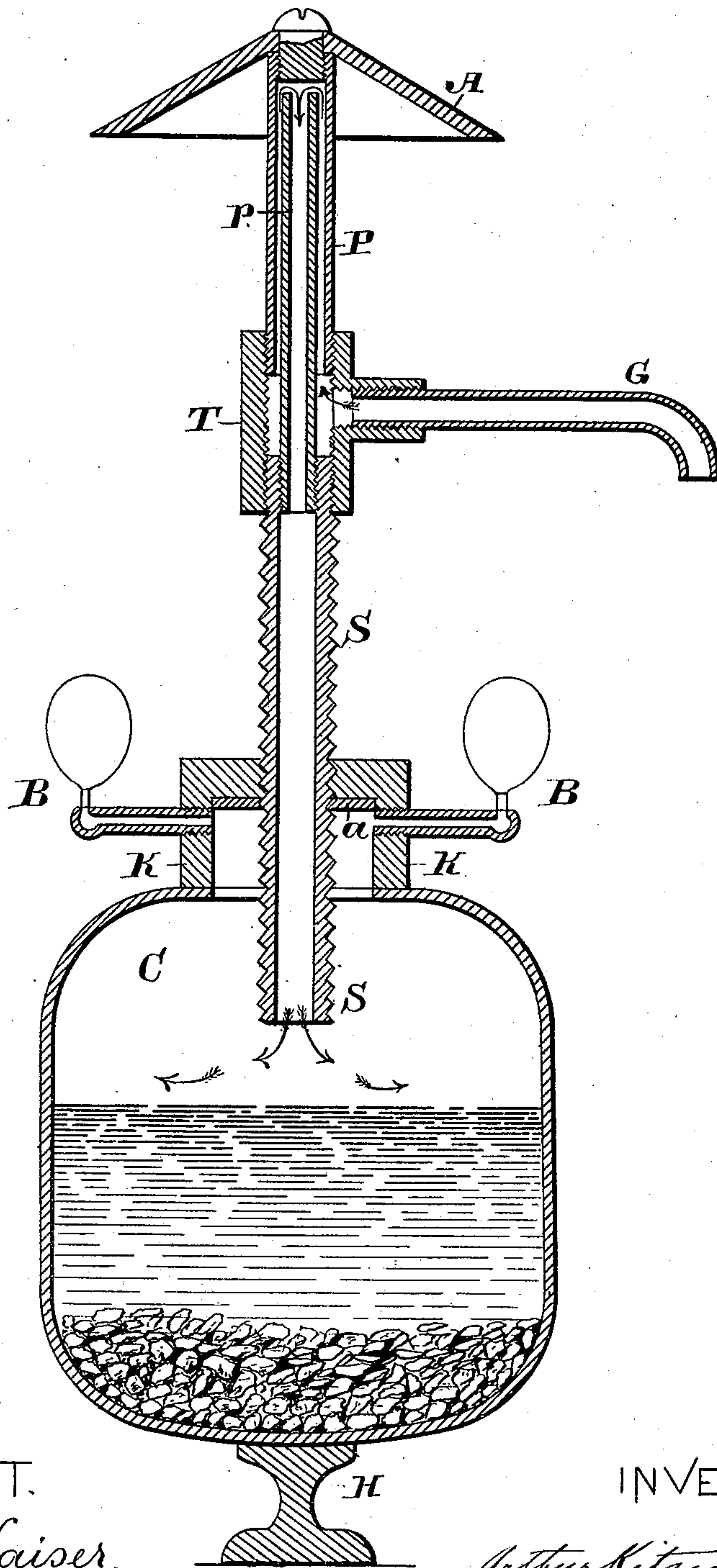


(No Model.)

A. KITSON.  
CARBURETING LAMP.

No. 370,340.

Patented Sept. 20, 1887.



ATTEST.

*J. Henry Kaiser.*  
*Victor J. Evans.*

INVENTOR.

*Arthur Kitson.*



# UNITED STATES PATENT OFFICE.

ARTHUR KITSON, OF PHILADELPHIA, PENNSYLVANIA.

## CARBURETING-LAMP.

SPECIFICATION forming part of Letters Patent No. 370,340, dated September 20, 1887.

Application filed May 9, 1887. Serial No. 237,663. (No model.)

*To all whom it may concern:*

Be it known that I, ARTHUR KITSON, a subject of the Queen of Great Britain, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Gas-Carbureting Lamps; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

The objects of my improvements are to provide in an ordinary gas-carbureting lamp a simple regulating device for controlling and equalizing the amount of hydrocarbon vapor produced, and provide a means for using carburetors holding a larger supply of enriching material than heretofore, and thus save the trouble of refilling so often.

Heretofore it has been impossible to use carburetors of larger sizes than those capable of holding a supply which would run from twenty to thirty hours. In sizes larger than these the carbureting process would cease at the end of that time, the gas being unable to reach the carbon with any force or with sufficient degree of pressure.

My improvements are shown in the annexed drawing.

The figure is a sectional view of a carbureting gas-lamp capable of being attached to an ordinary gas-bracket or arm of a chandelier.

C is the carbureting-vessel, attached to the metal collar K, which supports the burners B.

S is an ordinary gas-pipe, screw-threaded on the outside and fitted to the collar K, so that the carbureting-vessel may be raised and lowered on the fixture by turning it round the pipe S by means of the handle H.

T is an ordinary T-piece, the lower end of which is secured to the top of pipe S. Its upper end secures the pipe P, and the third opening secures the pipe G, which is attached to the gas-bracket or arm of chandelier, or any gas-supply pipe.

A is a metal dome designed to catch the heated products of combustion and hold them in contact with the pipe P.

p is a small pipe fitted to the interior of pipe S and running up nearly to top of pipe P, but allowing about one-half inch clearance.

The operation of the lamp is as follows: The gas enters the pipe G and ascends the pipe P in the space between pipe p and interior of P. At the top it enters the small pipe p and is conveyed down through pipe S onto surface of carbureting material in C. It then ascends to the burners B, where it is consumed. The heat arising from flames is conveyed to the pipes P and p by the heat-arrester A, and the gas is thus heated by contact with those pipes. It then enters the vessel C in a heated condition and rapidly volatilizes the hydrocarbons. By turning the vessel round the pipe S the flames can be brought in closer proximity to the heat-arrester, and thus the gas will be more highly heated and a greater amount of hydrocarbon vapor will be produced in the carburetor. A reverse action will produce the opposite effect. The distance of the end of pipe S—whence the gas issues into the vessel—from the surface of the carbureting material also effects the volatilization of the material. The nearer the pipe S is to the material the quicker will be the carbureting operation and the greater the amount of vapor produced. By turning the vessel C about S this distance is altered and regulated at pleasure. It is obvious, therefore, that the screwed pipe S and collar K, to which the carburetor is attached, form a regulating device for proportioning the amount of carbon vapor produced by first regulating the amount of heat conveyed to the gas; and, second, regulating the distance the gas has to travel before reaching the surface of the carbon.

This device permits the use of carburetors of much greater depth, and consequently greater capacity, than those now in use, since the supply-pipe S may be made to descend a considerable distance into the carburetor and volatilize the material at a considerably greater depth than if it were fixed at the mouth of the carburetor, as it is in all existing carbureting gas-lamps.

I prefer to make the screw on pipe S of a coarse gage of but a few threads to the inch, so that one turn of the vessel will raise or lower the vessel a considerable distance, and thus save time.

a is an asbestos washer to make a more perfect joint between screw S and collar K.

It is evident some other raising or lowering device might be substituted. For instance, S might be a plain pipe, and the collar K slide up and down and held to it by springs or  
5 levers.

I do not confine myself to the above construction.

Having fully described my invention, what I desire to claim and secure by Letters Patent is—  
10 ent is—

In a carbureting gas-lamp, the combination

of a gas-burner, a burner-support, a carbureting-vessel attached to said support, and a depending gas-supply pipe externally screw-threaded throughout its entire length and engaging a similar screw-thread in the burner-support, substantially as described. 15

ARTHUR KITSON.

Witnesses:

SAMUEL CROWTHER,  
THOMAS EVANS.