E. H. ANDERSON

VAPOR BURNER.

No. 27,676. Patented Apr. 3, 1860.

Fig. 1.

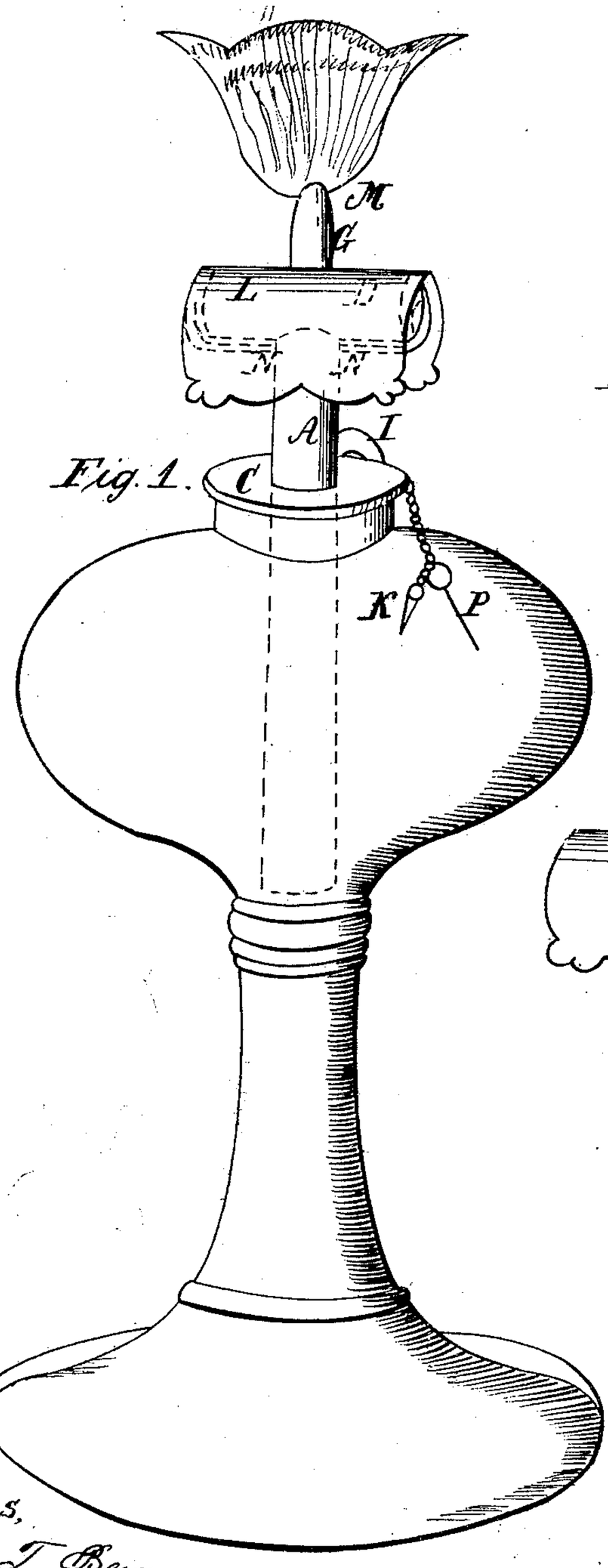
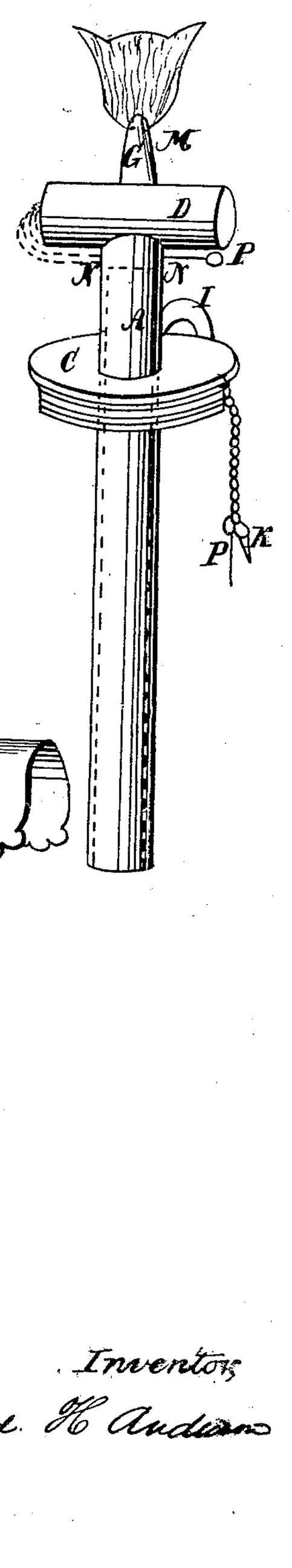


Fig. 2.



Witnesses,

Francis T. Berry

Edwin F. Warner

Inventor,

Edward H Anderson

UNITED STATES PATENT OFFICE.

EDWARD H. ANDERSON, OF EASTON, MARYLAND.

VAPOR-BURNER.

Specification of Letters Patent No. 27,676, dated April 3, 1860.

To all whom it may concern:

Be it known that I, EDWARD H. ANDERSON, of Easton, in the county of Talbot, in the State of Maryland, have invented a new and Improved Mode of Constructing Gas-Burning Fluid and Camphene Lamps; and I do hereby declare that the following is a full, clear, and exact description of the principle or character which distinguishes it from all other lamps before known and of the usual making, modifying, and using the same, reference being had to the accompanying drawings, of which—

Figure 1, is a perspective view. Fig. 2, is a side view.

The nature of my invention or improvement, consists in providing any ordinary glass or metal lamp of any description, as described in the accompanying drawings, with a conducting pipe A, passing perpendicularly through the screw-top C, of the lamp, to within three fourths of an inch of the bottom of the lamp, the lower end of the conducting pipe thus being constantly below the surface of the fluid. To the upper end of this conducting pipe A, a vacuum chamber D, is attached by screw thread or otherwise; G, the burner connected by screw thread or otherwise to the top of vacuum chamber D; N, N, the jet holes in the upper end of the conducting pipe A, and immediately under the vacuum chamber D; I, the air tube passing through the screw top C, and forming a free passage for the atmosphere with the inside of the lamp; K, the small cap or plug attached by the chain to the screw top C; L the cover to vacuum chamber D.

The chamber D, being exposed to the action of a flame, a vacuum is created in it by rarefaction. By means of the air tube I, passing through the screw top C, thereby forming a free connection with the air outside of the lamp, and there being no resistance in the chamber D, the fluid is forced up the conducting pipe A, into the chamber by the natural pressure exerted by atmospheric air on fluids in filling a vacuum thus created. To prevent the fluid rising to the chamber faster than it can be consumed and converted into gas, a piece of ordinary lamp wick is inserted in the conducting pipe A, sufficiently compressed as to regulate the flow of the fluid to the chamber D, where it is immediately converted into gas, from the action of the flame first used in igniting the lamp, passes out at the jet holes N, N, ignites, and after acquiring sufficient force, the gas ignites at the cut M, in the top of the burner G, and so continues to burn so long as the blow pipe action of the jets are suffered to be directed upon the under surface of the chamber D. When only one half the full sized light is desired, stop out one of the jet holes N, by inserting the small pin P, attached to the chain, in the hole; the pin P, being also used for clearing the holes from the gum of the fluid. The chamber cover L, is used to protect the jets from the action of currents of air, and to preserve a uniform heat to the vacuum chamber D. When the lamp is not in use the small plug K, is inserted in the end of the air tube I, to prevent the fluid from evaporating. When the lamp is burning there is no vapor passing out the air-tube I, as the air is constantly passing into the body of the lamp, which is necessary to the operation of the lamp.

The various apparatus which enter into the construction of my lamp, were invented long ago. The principles of atmospheric pressure are also well understood. I make no claim to them—nor do I claim the discovery of converting fluid or camphene into gas or vapor by the agency of heat, nor the attachment of vapor generators to ordinary hand lamps.

What I claim as my invention, and wish to secure by Letters Patent, is—

1. The original arrangement of apparatus above set forth, and the new and useful adaptation of them to the purpose of producing a light which will be economical in cost, and which will be entirely exempt from the danger attending many other gas lamps.

2. I claim the invention of a new and useful mode of procuring light by the combined action of atmospheric air and heat, by means of my original adaptation of the

jet holes N, N, in the upper end of the conducting pipe A, acting upon the under surface of the chamber D, the blow-pipe principle of the jets producing the requisite heat to manufacture the gas as required for the support of the flame, and which combination enables me to raise the flame above the entire apparatus, thus rendering it clear of all obstructions, all constructed and operating as above set forth.

EDWARD H. ANDERSON.

Witnesses:

EDWIN F. WORNER,

FRANCIS T. BENNY.