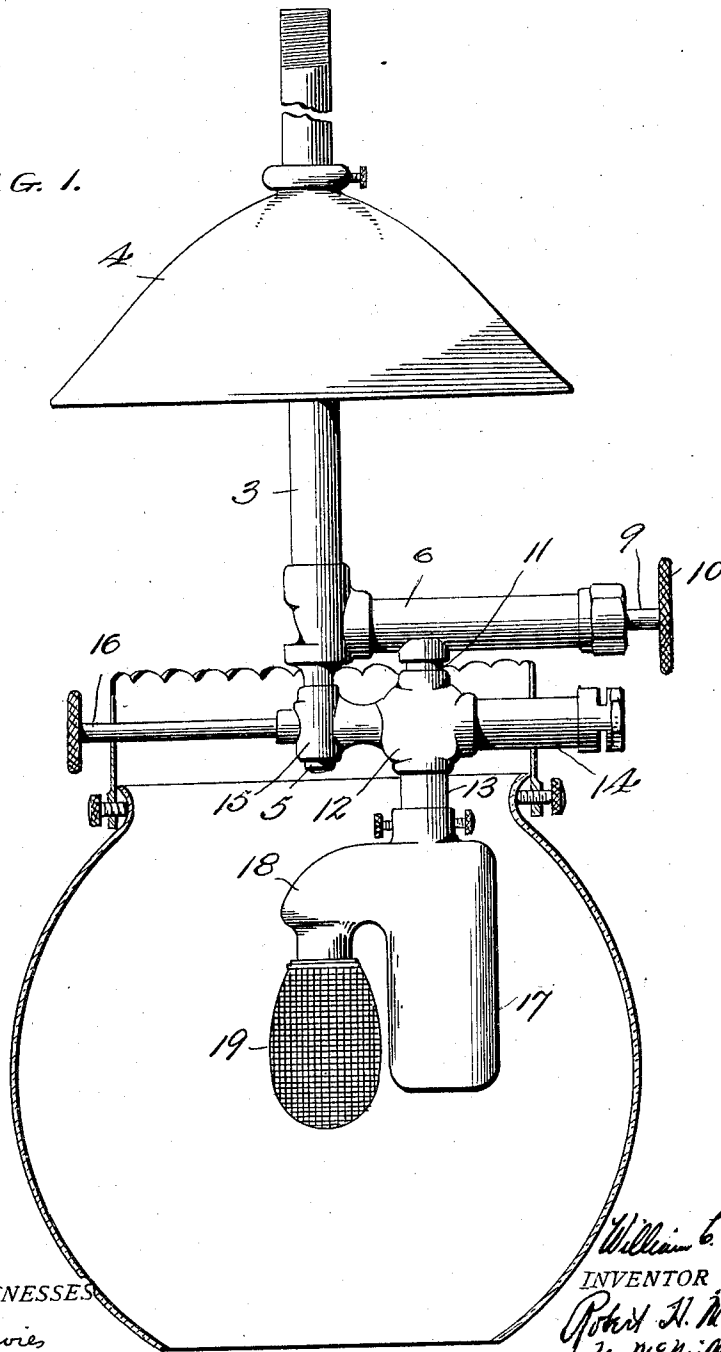


W. C. COLEMAN.
LAMP.
APPLICATION FILED AUG. 21, 1909.

965,440.

Patented July 26, 1910.
2 SHEETS—SHEET 1.

FIG. 1.



WITNESSES

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E. G. Mc Carthy.

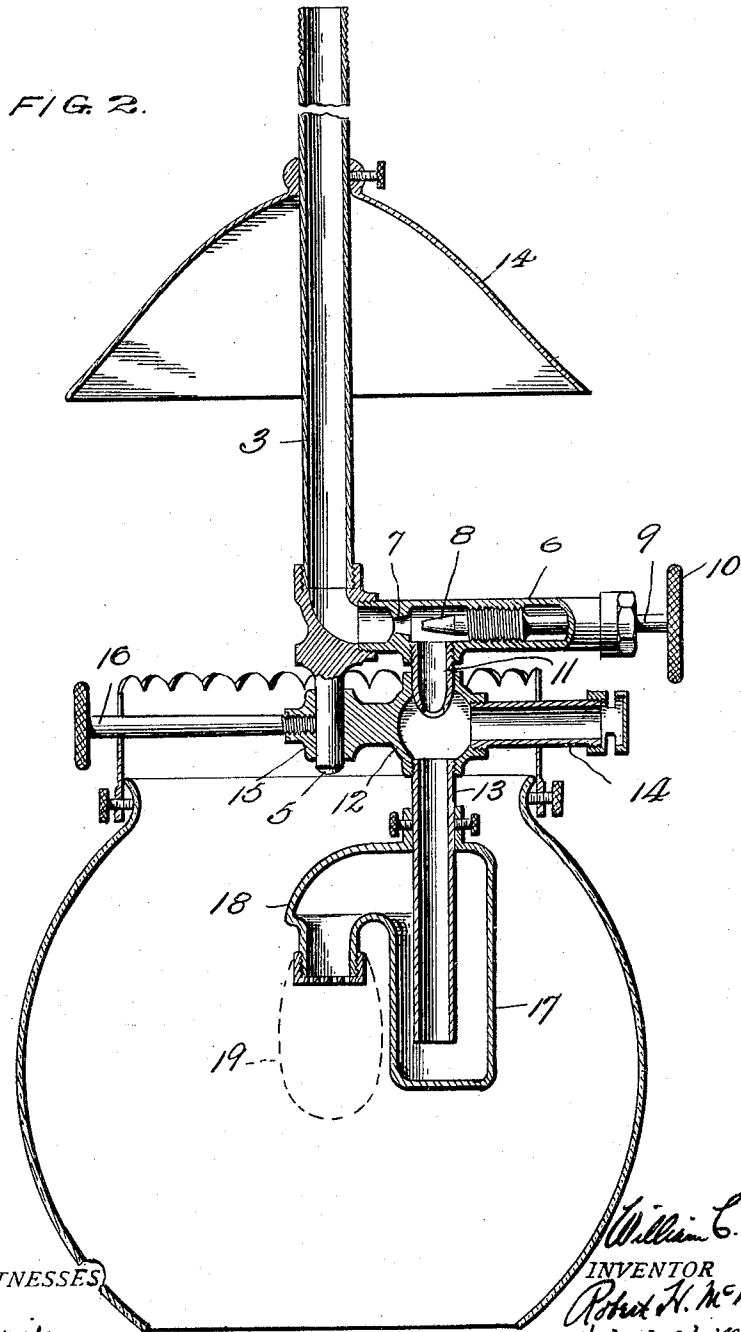
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WITNESSES

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UNITED STATES PATENT OFFICE.

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LAMP.

965,440.

Specification of Letters Patent. Patented July 26, 1910.

Application filed August 21, 1909. Serial No. 514,063.

To all whom it may concern:

Be it known that I, WILLIAM C. COLEMAN, a citizen of the United States, residing at Wichita, in the county of Sedgwick and State of Kansas, have invented certain new and useful Improvements in Lamps, of which the following is a specification.

The present invention has for its object the provision of novel, simple and practical means for producing and burning a mixture of air and vaporized fuel.

In the drawings:—Figure 1 is a side elevation of a preferred embodiment of the invention. Fig. 2 is a vertical sectional view therethrough.

Similar reference numerals designate corresponding parts in all the figures of the drawings.

In this embodiment, a vertical vaporizing tube 3 is provided, on which may be mounted a canopy or bell 4. This tube carries at its lower end and in alinement therewith, a depending stem 5. A substantially horizontal valve casing 6 is connected to the lower end of the tube, and extends at right angles thereto, said casing having a valve seat 7, with which coöperates a combined cut-off and vapor-regulating valve 8, said valve having a stem 9 projecting from the casing, and provided with a hand wheel 10. Depending from the casing 6 on the opposite side of the valve seat 7 to the vaporizing tube 3, is a vapor-feeding nozzle 11 that detachably fits into the head 12 of a downwardly extending combined air and vapor-conducting pipe 13. This pipe has a right angularly disposed section 14 at its upper end, constituting an air inlet, and it also has an oppositely extending collar 15 that is mounted on the stem 5 and is detachably held thereon by a set screw 16. The pipe 13 depends within a mixing chamber 17, from the upper end of which extends one or more offset depending nipples 18 arranged directly below the vaporizing tube 3, and designed to support a mantle, as 19.

With this structure, the liquid fuel is delivered to the upper end of the vaporizing tube 3, and as it passes down through the same is converted into vapor. This vapor passes through the valve casing 6, and is discharged downwardly through the nozzle 11 into the tube 13. It is thoroughly mixed with the air upon its upward return through the chamber 17, and is finally delivered to the mantle 19 through the nipple 18.

This structure has many advantages. In the first place, the controlling valve 8 operates against the pressure of the fluid, and not only constitutes means for completely cutting off the vapor, but also effectively controls the amount delivered to the nozzle 11, so that the light can be raised or lowered, as desired. Furthermore the parts that are liable to become clogged and inoperative, are entirely accessible and can be readily removed. For instance, by loosening the set screw 16, the chamber 17, the pipe 13 and the head 12 can be detached as a unit, leaving the nozzle 11 exposed.

From the foregoing, it is thought that the construction, operation and many advantages of the herein described invention will be apparent to those skilled in the art, without further description, and it will be understood that various changes in the size, shape, proportion and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

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

1. In a lamp, the combination with a vertical vaporizing tube, of a mixing chamber located below but offset therefrom, a depending feeding nozzle connected to the lower end of the vaporizing tube and delivering downwardly into the mixing chamber, a substantially horizontal combined cut-off and regulating valve interposed between and connected to the vaporizing tube and nozzle, and a depending burner connected to one side of the upper end of the mixing chamber and disposed below the vaporizing tube, said valve having an exposed handle disposed out of the range of heat from the burner.

2. In a lamp of the character set forth, the combination with a vaporizing tube, of a mixing chamber comprising a body, an air and vapor conducting tube depending within the body and having an inlet at its upper end, a valve casing connected to the lower end of the vaporizing tube, and offset therefrom, a depending feeding nozzle carried by the valve casing and delivering into the conducting tube, a valve located in the casing, and a mantle support carried by the mixing chamber body.

3. In a lamp of the character set forth, the combination with a vertical vaporizing tube,

of an air mixing chamber located below and at one side of the same, a mantle support carried by the upper end of the chamber and disposed below the vaporizing tube, a substantially horizontal valve casing connected to the lower end of the vaporizing tube, a valve located in the casing, a depending feeding nozzle connected to the valve casing and offset from the vaporizing tube, and a combined air and vapor conducting pipe disposed in line with the nozzle and depending within the chamber, said pipe having an air inlet at its upper end.

4. In a lamp of the character set forth, the combination with a substantially vertical vaporizing tube, of a valve casing and a depending stem mounted on its lower end, a vapor delivering nozzle carried by the valve casing and located at one side of the stem, a combined cut-off and regulating valve located in the casing, a supporting device detachably mounted on the depending stem,

and air inlet and mixing means mounted on and supported by said device, said means being detachably associated with the nozzle. 25

5. In a lamp of the character set forth, the combination with a vertical vaporizing tube, having a depending stem, a depending nozzle connected to the tube, a valve interposed between the nozzle and tube, a combined air and vapor conducting pipe detachably associated with the nozzle and having a collar detachably fitted on the stem of the vaporizing tube, a device for detachably securing the collar in place on the stem, and a mixing chamber carried by the combined air and vapor conducting pipe and having a mantle support. 30 35

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM C. COLEMAN.

Witnesses:

CHAS. T. WELLS,
LOWELL I. McCONNELL.