No. 869,440. PATENTED OCT. 29, 1907.

J. LANDSIEDEL.

HYDROCARBON LAMP.

APPLICATION FILED FEB. 14, 1905.

FIG. 1

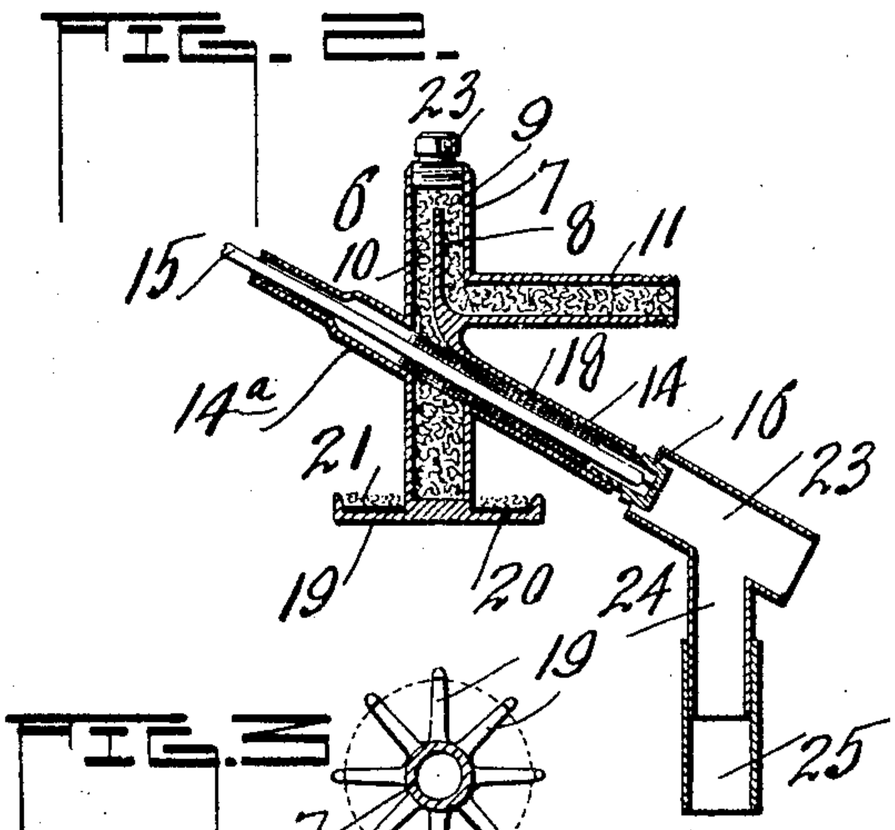


FIG. 3

FIG. 4

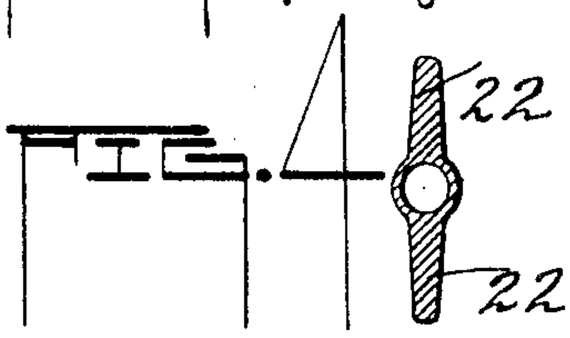


FIG. 2

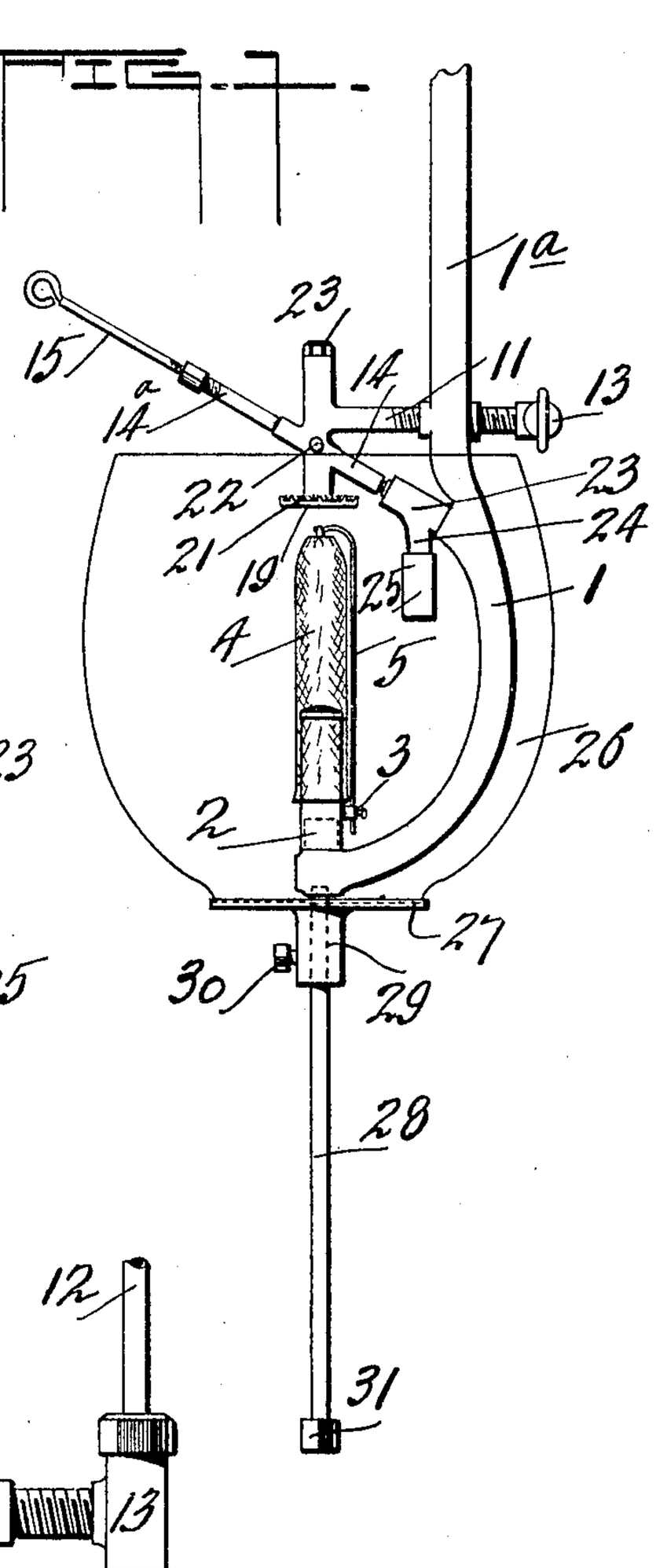
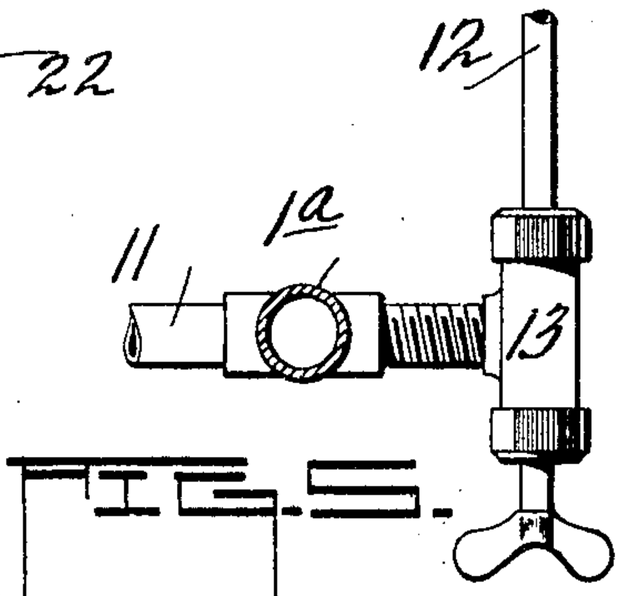


FIG. 5



Witnesses:
A. B. Carey
H. V. Gibson.

Inventor:
John Landsiedel
By Chas. N. La Porte
Atty.

UNITED STATES PATENT OFFICE.

JOHN LANDSIEDEL, OF PEORIA, ILLINOIS.

HYDROCARBON-LAMP.

No. 869,440. Specification of Letters Patent. Patented Oct. 29, 1907.

Application filed February 14, 1905. Serial No. 245,625.

To all whom it may concern:

Be it known that I, JOHN LANDSIEDEL, a citizen of the United States, residing at Peoria, in the county of Peoria and State of Illinois, have invented certain new and useful Improvements in Hydrocarbon-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.

This invention has reference to new and useful improvements in hydro-carbon lamps, particularly to that class of vapor lamps where the generator is disposed above the burner and mantle supported thereon.

The object which I have in view, is to provide a generator, composed of a vertical member divided in its upper portion and which communicates with a feed, both of which are packed with non-combustible material. The lower portion of the vertical member communicating with a tubular portion in which is operatively carried a needle valve stem which engages an orifice in the end of the said tubular portion. The body of the vertical member provided with laterally carried heat-catchers and the lower end of the said member having extending out from the same a series of laterally disposed heat-catchers, which, together, form a support for suitable packing or filling which serves as a torch for the said generating body.

My object is to provide a generator which is serviceable for one or more mantle lamps; which may also be connected to a supply under pressure; also to so construct the said generator that the danger of clogging will be obviated, and to this end my invention consists in the general as well as details of construction and combination of parts, all of which as hereinafter set forth and claimed.

Referring to the drawings, Figure 1 is an elevation, greatly reduced, showing in outline my improved generator and the general arrangement of a lamp to which the same is applied; Fig. 2 is a sectional detail, enlarged, showing the interior construction of the entire generator and the hot-air receiver having suitable connection with the same; Fig. 3 is a detail in cross-section, showing the arrangement of the heat-catchers, which also serve as a torch, when supporting suitable material to be used for that purpose, here omitted; Fig. 4 is a cross-section through the body of the vertical portion of the generator showing the heat-catchers, and Fig. 5 is a plan of a portion of the support for the generator body, and the arrangement of the valve which shuts off against the hydro-carbon.

Like numerals of reference indicate corresponding parts throughout the figures.

1 is a fixture or lamp-carrying support, adapted to be suspended from a ceiling or other suitable place, the extension 1^a for sustaining the said support being broken off as shown. The lower portion of the support 1 is of suitable contour and has attached thereto the burner 2, which being provided with an ear 3 is adapted to support a mantle 4 attached to a rod 5 which is suitably secured to the ear 3, all of which is seen in Fig. 1.

6 denotes a generating body which is composed of the vertical tubular portion 7, the upper half of which is divided by a partition 8 reaching nearly to the top of the said portion 7 providing the passageways 9 and 10; the former communicating with a lateral 11 forming a feed tube for hydro-carbon which is fed to the same from a feed tube 12 by way of a valve 13 which is capable of being shut off against the supply in a manner usual in this class of device. The lateral 11 is secured in the extension 1^a of the support and communicates with the valve 13 which is also secured to the said extension. The supply of hydro-carbon through the feed tube 12 may be fed under pressure or otherwise, as may be desired.

About central of the body of the generator or tubular member 7, the same merges into the oppositely extended tubular portions 14 and 14^a which serve as the main generating feed tube through which is operatively carried a needle valve stem 15, provided with a needle point adapted to control an orifice in an adjustable and detachable cap or coupling 16 having screw connection with the forward end of the tube 14.

The lateral or feed 11 and the compartments or passageways 9 and 10, as well as the lower half of the generating body are filled with asbestos or other fluid-retaining non-combustible material. While the tubular portion 14 extending from the far side of the vertical tubular portion of the generator body to a point near the outer end thereof is lined with a gauze like tubular body 18 through which must pass hydro-carbon vapor, and operating centrally through the same is the valve stem 15. The preferred construction of the generating body is, that the tubular portions 14 and 14^a be disposed in a plane extending obliquely to the general vertical line of the portion 7 thereof, although this arrangement may be modified as desired. However the form shown provides for the easy passage of vapor and gas to the support 1, which serves as a gas conduit from the generator to the burner, and so elevates the operative end of the stem 15 as to be conveniently placed for handling by an operator.

The lower end of the portion 7 of the generator is provided with a series of laterally disposed heat-catchers 19, turned up at their outer ends and in addition to serving as heat-catchers in proximity to the top of the mantle, also serve to support a foraminated sheet 20 upon which is placed asbestos or other non-combustible material 21, upon which may be poured alcohol or other suitable fluid, which, when ignited forms a torch which quickly heats the lower portion of the generator body and the tube 14, and if the valve 13 is opened the hydro-carbon will pass through the fillings in the

lateral 11 and up through the fillings in the passageway 9 over the partition 8 and down through the fillings in the passageway 10 and into the lower portion of tube 7 beneath the valve stem 15, by which time the hydro-carbon has become thoroughly vaporized and passes out through the portion 14 and the discharge orifice thereof, if the valve stem 15 has been withdrawn from such orifice, where, in a manner to be described the vapor is mixed with heated air to make gas, which is directed to the burner and lighted. During the burning of the lamp the extensions 19 which are heated by the lighted mantle assist in keeping the lower portion of the tube 7 and tube 14 hot for the purpose of quickly vaporizing the hydro-carbon passed thereto in manner described. There is also provided the heat-catchers 22 radiating from the vertical portion of the generator where the tubes 14 and 14ª merge into the same, which act as supplemental catchers to insure a uniform heating of the said generating body.

The upper end of tube 7 is closed by a cap 23, being also a means by which access may be had to the passageways 9 and 10 of the tube portion 7.

The filling in the parts 11, 9 and 10 and the lower portion of tube 7 serve to intercept any particles of dust or other extraneous substance in the hydro-carbon, and act as a strainer therefor; the lower portion of tube 7 serving as a depository therefor.

The cap or nozzle 16 is disposed in the open end of a receiver 23 which at its opposite end is secured to and opens in the gas conduit 1 of the support. The said receiver 23 has depending therefrom a neck 24 to which a tubular portion 25 has preferably a telescoping connection and positioned so as to convey hot air to be mixed with the vapor from the generator, for the purposes apparent.

Most of the support 1 and the lower portion of the generating body and air receiver is adapted to be disposed within a globe 26 which is supported by a plate 27 vertically adjustable on a stem 28, secured at its upper end to the lower portion of the support 1. The plate 27 being provided with a collar 29 by means of which the said plate and globe may be lowered or raised when access is had to any part of the lamp and its parts, the said collar being secured by the thumb nut 30, as shown.

The stem 28 in this instance is designed to be tubular, communicating with the lower end of the gas conduit, and the lower end of the stem is closed by a cap 31. It is adapted with a construction of this kind, that, in the event of the generator not being hot enough to vaporize all of the hydrocarbon, that which passes into the gas conduit 1 will find its way into the stem 28 which serves as a depository therefor, the removal of the cap 31 permits the drawing off of the same.

Having thus fully described my invention, what I claim and desire to secure by Letters Patent of the United States, is:—

1. In a device of the character described, the combination with a fixture and a burner attached thereto, a generating body comprising a vertical tubular member, a feed connected to said generating body and to a suitable supply, a sleeve projecting transversely from opposite sides of said tubular member and communicating therewith, a valve stem operatively carried in said sleeve, radially extended means projecting from the extreme lower portion of said tubular member, a foraminated sheet extending around said member and seated on said radially extended means, and suitable non-combustible material on said sheet.

2. In a device of the character described, the combination with a fixture and a burner attached thereto, a generating body comprising a vertical tubular member, a feed connected to said generating body and to a suitable supply, a sleeve projecting transversely from opposite sides of said tubular member and communicating therewith, a valve stem operatively carried in said sleeve, radially extended means projecting from the extreme lower portion of said tubular member and having upwardly extended portions at its outer edge adapted to support between the extended portions thereof and the outer wall of said member suitable non-combustible material.

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

JOHN LANDSIEDEL.

Witnesses:
A. B. CAREY,
CHAS. W. LA PORTE.