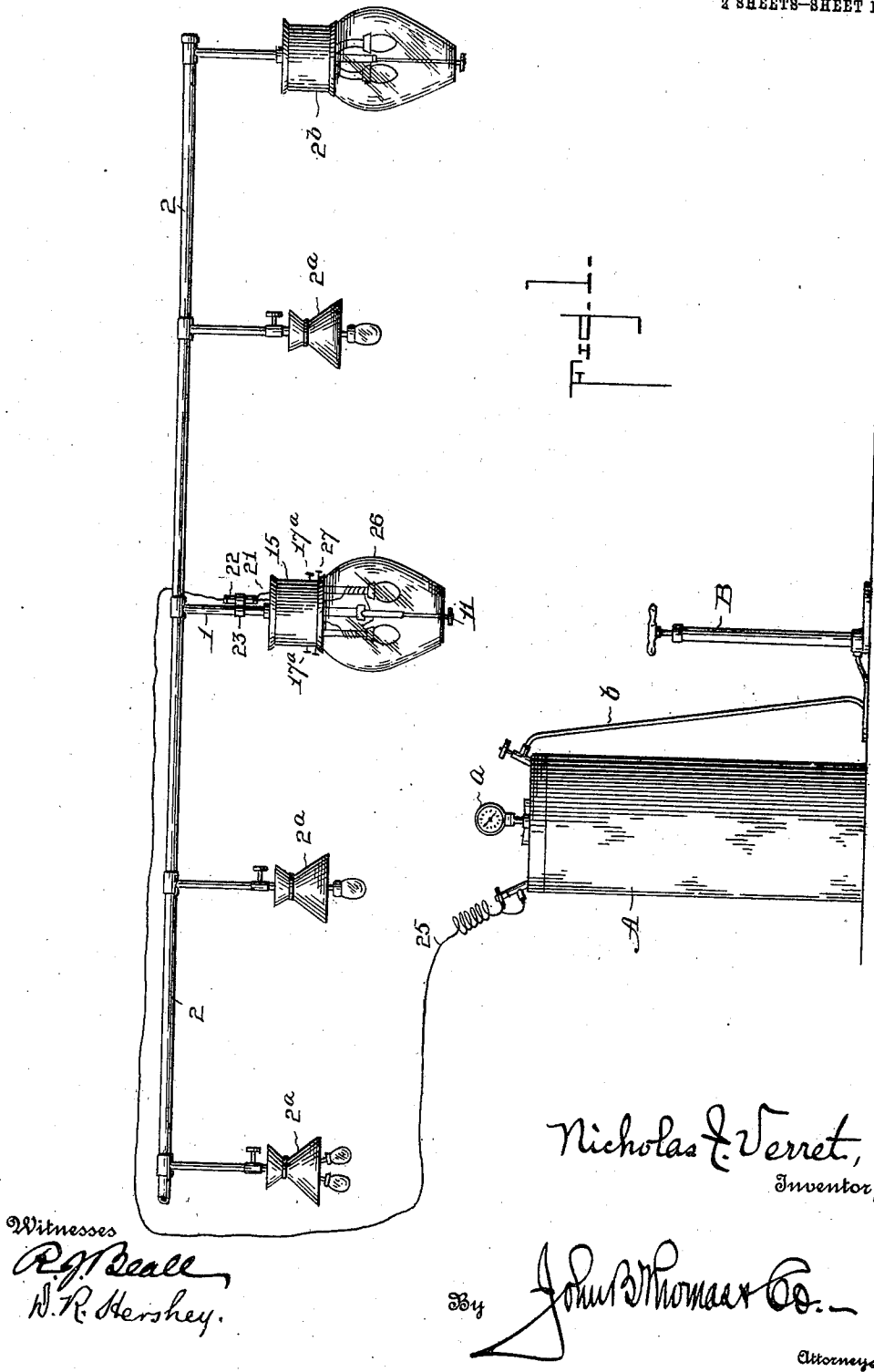


N. J. VERRET.
ILLUMINATING LAMP.
APPLICATION FILED FEB. 24, 1911.

996,436.

Patented June 27, 1911.

2 SHEETS-SHEET 1.



Witnesses
R. J. Seale
W. R. Hershey.

Nicholas J. Verret,
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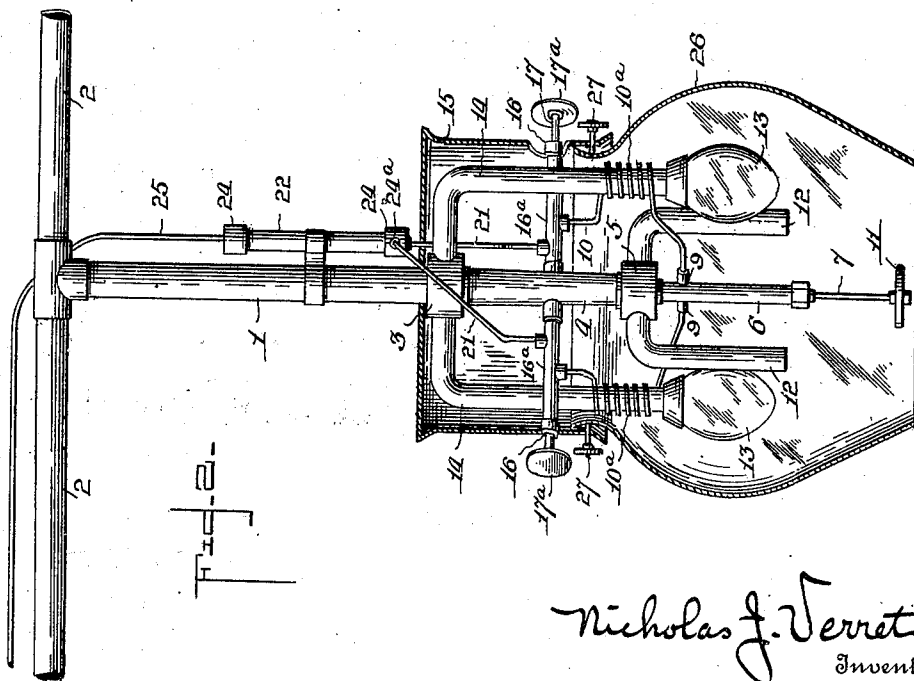
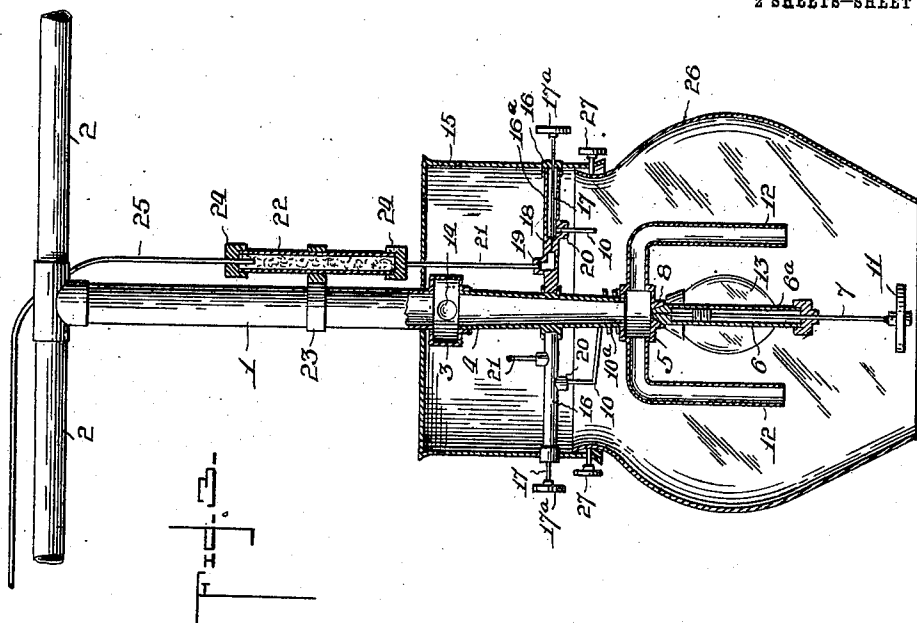
By John B. Thomas & Co.
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UNITED STATES PATENT OFFICE.

NICHOLAS J. VERRET, OF LITTLE ROCK, ARKANSAS.

ILLUMINATING-LAMP.

996,436.

Specification of Letters Patent. Patented June 27, 1911.

Application filed February 24, 1911. Serial No. 610,529.

To all whom it may concern:

Be it known that I, NICHOLAS J. VERRET, a citizen of the United States, residing at Little Rock, in the county of Pulaski and State of Arkansas, have invented certain Improvements in Illuminating-Lamps, of which the following is a full and complete specification.

My invention is an improvement in illuminating lamps, and the primary object of the invention is to provide an illuminating lamp which will not only generate an efficient gas or admixture of hydrocarbon and air for its own consumption, but also an additional quantity to supply a number of other lamps located away from the generating lamp; whereby the supply of illuminant for all the lamps may be conveniently regulated at one of the lamps or burners.

A further object of my invention is to provide an illuminating lamp or generator of this character which can be installed at little trouble and expense, and which can be readily removed when required, for instance for examination and repair.

A further object of the invention is to provide a generating lamp with a plurality of valves for feeding the hydrocarbon to the mixing chamber, a plurality of air-supply pipes, and a plurality of hollow feed-wires, the latter having coils encircling the supply pipes for the generating-lamps; all of the parts being inclosed so as to be properly heated for efficiency in producing a rich admixture or gas of high illuminating power.

Other objects and advantages of the invention will hereinafter appear, and what I claim as new in the art will be specifically set forth in the appended claims.

In the accompanying drawings, forming part of this specification:—

Figure 1 is a view showing the gas lighting apparatus. Fig. 2 is a perspective view of a generating lamp, constructed in accordance with my present invention, a part of the globe and hood being broken away to show the arrangement of devices inclosed therein. Fig. 3 is a vertical longitudinal sectional view, taken on a line with the regulating valves.

Like numerals of reference indicate like parts in all the figures of the drawings.

In carrying out my present invention I provide a vertical pipe 1, of suitable diameter, and to the lower end of this pipe attach the carbureting or gas generating devices

hereinafter described, said pipe in addition to its office of supporting the carbureting devices also serving as a means for distributing the carbureted air or gas to branch service pipes, as 2, connected to the upper end of pipe 1 and extending to numerous points for the consumption of the gas, for instance by illuminating lamps, as 2^a and 2^b.

To the lower end of pipe 1 is attached a coupling 3, for the connection of a downwardly tapered pipe or mixing-chamber 4, the latter having at its lower end a coupling 5, into which is threaded a depending needle-valve 6. The needle-valve comprises a tubular casing 6^a, and a rod 7 threaded therein, as shown in Fig. 2, and provided with a tapered or pointed upper end which fits in a corresponding opening in the valve-seat 8, the casing being provided with two, or more, nipples 9, into which extend hollow wires 10, hereinafter particularly described, for feeding gasolene or hydrocarbon to the valve. The rod 7 of this needle-valve extends below the tubular casing, and is provided at its lower end with a disk or wheel, 11, for manipulating the same. *

Connected to the lower coupling 5 are two inlet pipes 12, which extend downwardly so that their lower open ends will be disposed a slight distance below two generating-lamps 13, 13; these lamps being attached to the lower ends of vertical pipes 14 curved at their upper ends for connection with the coupling 3 which communicates with the mixing chamber. Supported by the mixing-chamber, and by a hood, as 15, are two or more needle-valves 16, each comprising a tubular casing 16^a and a rod 17, the latter being threaded in the casing and having a tapered inner end fitting a valve-seat 18 located intermediate an inlet opening 19 and an outlet opening 20. The rods 17 are each provided with a disk or wheel, 17^a, for turning the same. To the inlet openings 19 of the feed-valves 16 hollow wires 21 are led, respectively, from a packing-tube 22 supported from the service-pipe 1 by means of a suitable band or strap, as 23, and from the outlet openings 20 of said valves are led the hollow wires 10, hereinbefore referred to, and which extend to the regulating-valve 6. The hollow wires 10 are provided each with a coil 10^a, the coil of one wire encircling one of the generating lamp supply pipes 14, and the coil of the other hollow wire encircling the supply-pipe of the other generating-

lamp. The packing-tube 22 comprises a casing 22 at the ends of which are caps or nuts 24, the upper cap having a central aperture to receive the gasolene supply pipe 25, while the lower closing cap or nut is provided with opposite nipples, as 24^a (Fig. 2) to which the feed-pipes or hollow wires 21 are attached. The casing of the packing-tube is supplied with a suitable packing, such as is usually employed. The supply-pipe 25 for the gasolene or other hydrocarbon extends to a suitable storage tank A, preferably located outside of the building to be lighted, said storage tank being of usual construction and having an air-pump B, feed-pipe *b*, and pressure-gage *a*.

The lower end of the hood 15 is flared outwardly to receive a globe 26, the latter being held in place by means of screws 27 threaded through the side walls of the hood. It will be noted that the hood and globe inclose practically all of the carbureting or gas generating devices, and this arrangement is for the purpose of conveniently heating said devices from the generating lamps, inasmuch as the heat from the generating lamps is confined by the hood and globe. In this particular it will also be noted that in the operation of the generating lamps the coils of the hollow feed-wires being located directly above said lamps will present a considerable length of wire to be readily heated so as to vaporize the hydrocarbon on its way to the mixing-chamber.

The operation of the generating-lamp will be readily understood from the foregoing description, in connection with the accompanying drawings, for when both lamps are burning to give a maximum light and to supply a maximum quantity of carbureted air to supply other lamps, the gasolene is fed from the packing-tube 22 by the hollow wires 21 to the two supply-valves 16, and from the latter to the regulating needle-valve 6 by way of the coiled hollow wires 10, the gasolene being vaporized by the coils on its way to the said needle-valve, and being injected into the mixing tube is properly mixed with air drawn up through the air-supply pipes 12. The gas or admixture of hydrocarbon and air passes into the service pipe 1 and also into the branches or arms 14, so as to supply other lamps and the lamps 13. In this instance, as will be noted, all the parts for generating the gas or mixture are inclosed so as to be properly heated to get efficient results, the air-supply pipes depending sufficiently to receive air which is only slightly heated. When only a little light is required one of the generating lamps 13 alone may be operated, in which instance the feed-valve 16 supplying the hollow-wire around the supply pipe of said lamp is open, while the companion feed-valve, supplying the other hollow-wire may be or is closed;

and this condition exists, also when a low light is maintained in one of the generating-lamps during the day time and so that the generating lamp may be quickly started up to its full capacity when required at night. By tapering the mixing chamber, as hereinbefore described, the vaporized gasolene which is injected into the lower or smaller end thereof causes a suction of air through the air-supply pipes, and the gasolene and air are thoroughly mixed as they pass upward in the mixing chamber.

The convenience of employing a generating lamp of the construction shown and described will be readily appreciated, for this lamp becomes the main lamp and others are supplied by the branch service pipes 2, and the quantity of mixture necessary to supply the other lamps may be regulated by adjusting the valves of this main lamp.

It will be understood, of course, that though I have shown and described only two burners or lamps 13 in the generating-lamp the number may be increased, and accordingly the number of feed-valves and hollow feed wires increased. Therefore, in the claims the word "plurality" is used to cover two or more of the devices employed.

Having thus described my invention, I claim:

1. In an illuminating or generating lamp, the combination with a plurality of burners or generating-lamps and supply pipes therefor, of independent hollow feed-wires coiled around the supply-pipes for the lamps, a mixing chamber communicating with the supply pipes, a regulating-valve at the lower end of the mixing-chamber and receiving the hydrocarbon from the plurality of hollow feed-wires, and air-inlets to the mixing-chamber; together with a hood and globe inclosing the parts, substantially as shown and described.

2. In an illuminating or generating-lamp, the combination, of a supporting service pipe having a plurality of branch pipes or arms at its lower end, lamps or burners at the ends of said branch pipes or arms, independent hollow feed wires around the branch pipes or arms above the lamps or burners, a mixing chamber communicating with the supply pipe, a valve communicating with the mixing chamber and receiving the hydrocarbon from the hollow feed-wires, and air inlets to the mixing-chamber; together with a hood and globe inclosing the parts, substantially as shown and described.

3. In an illuminating or generating lamp, the combination, of a supporting service pipe having a plurality of branch pipes or arms at its lower end, lamps or burners at the ends of said branch pipes or arms, independent hollow feed wires around the branch pipes or arms above the lamps or burners, a mixing-chamber communicating

- with the supply pipe, an enlarged coupling at the lower end of the mixing-chamber, a valve in the lower end of the coupling receiving the gasolene from the hollow feed-wires, and depending air-supply pipes connected to the coupling and having their lower open ends below the lamps; together with a hood and globe inclosing the parts, substantially as shown and described.
4. In an illuminating or generating lamp, the combination, of a supporting service pipe having a plurality of branch pipes or arms at its lower end, lamps or burners at the ends of said branch pipes or arms, independent hollow feed wires coiled around the arms above the lamps, an independent supply-valve for each feed-wire, a mixing chamber communicating with the supply pipe, a valve communicating with the mixing-chamber and receiving the hydrocarbon from the hollow feed-wires, and air-inlets to the mixing-chamber; together with a hood and globe inclosing the aforesaid parts, substantially as shown and described.
- In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

NICHOLAS J. VERRET.

Witnesses:

WM. HIRBACH,
R. E. CORNISH.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
