

R. M. DIXON.
GAS LIGHTING APPARATUS.
APPLICATION FILED FEB. 16, 1906.

986,369.

Patented Mar. 7, 1911.

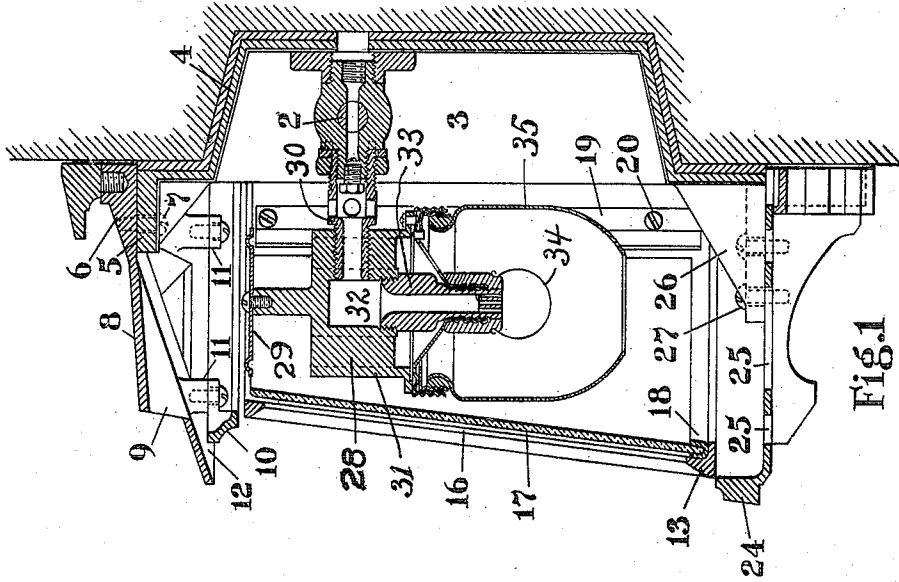


Fig. 1

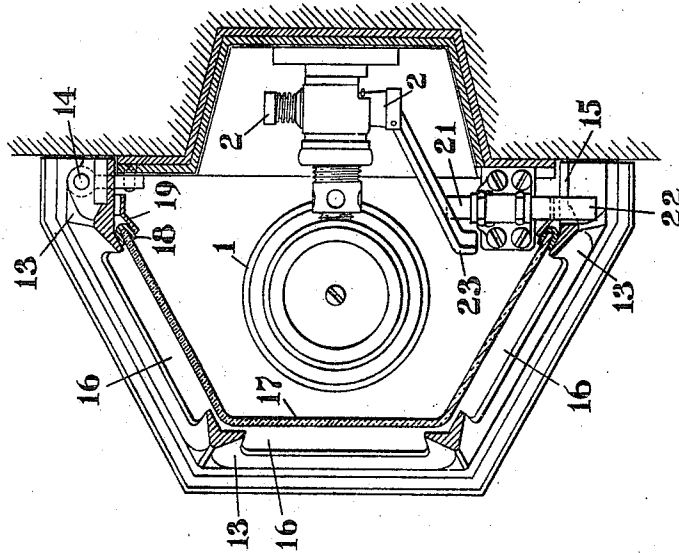


Fig. 2

WITNESSES:

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UNITED STATES PATENT OFFICE.

ROBERT M. DIXON, OF EAST ORANGE, NEW JERSEY, ASSIGNOR TO THE SAFETY CAR HEATING & LIGHTING COMPANY, A CORPORATION OF NEW JERSEY.

GAS-LIGHTING APPARATUS.

986,369.

Specification of Letters Patent.

Patented Mar. 7, 1911.

Application filed February 16, 1906. Serial No. 301,351.

To all whom it may concern:

Be it known that I, ROBERT M. DIXON, residing at East Orange, in the county of Essex and State of New Jersey, have invented
5 certain new and useful Improvements in Gas-Lighting Apparatus, of which the following is a full, clear, and exact description, such as will enable others skilled in the art to which it appertains to make and use the
10 same.

This invention relates to an illuminating apparatus, but more particularly it concerns features of construction of casing for a gas lamp.

15 One object of this invention is to provide a structure particularly applicable to the side walls of a railroad car or other inclosure to be lighted.

Another object within the purpose of this
20 invention resides in a means for inclosing a gas lamp which will provide a superior system of ventilation, whereby the vitiated products of combustion may freely escape and fresh air be freely supplied to take the
25 place of the same.

Another object within the contemplation of the invention consists in an inclosure for a gas lamp whereby access may be conveniently had to the latter in order that a
30 proper operation of the same may be insured.

Another object is to provide a convenient means in an apparatus of the class described whereby the flow of gas may be readily controlled.
35

Another object is to provide a gas illuminating apparatus, which, from an operative standpoint, will possess a high degree of efficiency and durability in usage, and which,
40 structurally considered, will be of the utmost simplicity consonant with the ends to be attained, being composed of but few parts, all adapted for being made at a minimum of cost and individually so formed as
45 to be capable of being easily assembled into a neat and compact arrangement for accomplishing the purposes intended.

Other objects and advantages will be in part obvious and in part pointed out hereinafter.
50

With these and other ends in view, this invention accordingly consists in the features of construction, combinations of parts and arrangement of elements which will be exemplified in the embodiment thereof herein-

after described and the scope of the application of which will be indicated in the following claims.

In order that the invention may be more fully understood and made comprehensible
60 to others skilled in its relating arts, drawings illustrating a convenient manner of carrying out the same are appended as a part of this specification, and, while the controlling principles of the invention may
65 be otherwise applied by modifications falling within the scope of the claims, the herein disclosed embodiment is that which will ordinarily be preferable to employ in practice, and is regarded as representing substantial improvements over many of the
70 seemingly obvious variations of the same.

In the accompanying drawings, like numerals of reference denote corresponding parts throughout all the figures, of which,
75

Figure 1 is a sectional elevation showing the general arrangement of the parts as applied to a side wall. Fig. 2 is a horizontal section of the device set forth by Fig. 1 and showing certain details of construction not
80 clearly appearing in said figure.

In the practical carrying out of this invention, it will be clear that various types of illuminating burners may be employed in connection therewith, but as a better distribution of light is obtained from the consumption of gas in an inverted burner, the preferred form of the latter is embodied in this exemplification of the invention.

The burner as a whole has been designated
85 on the drawings by 1 and comprises a stop cock 2 of suitable form and construction, to which is connected, by means of an inspirator 30, the lamp or burner body 31. The inspirator 30 may be of any desired construction adapted to draw in air from the space surrounding the lamp body and inject the same, together with the gas passing through the cock 2, into a mixing chamber
90 32 formed in the said burner body. The nozzle 33 depending from the body 31 provides a channel through which the combustible mixture passes from the chamber 32 to the inverted mantle 34. Surrounding the mantle is a globe 35 having an opening in
105 the bottom thereof through which air is admitted to the exterior of the mantle to aid in the proper combustion of the combustible mixture issuing from said nozzle 33. Passages or channels 28 are provided in the
110

body 31 to carry off the products of combustion, so that the inspirator will not introduce vitiated air into the mixing chamber. In order that space may be economized, it is preferable to arrange said stop cock in a recess or concavity 3 which is formed in the side wall of the car or other inclosure to be illuminated. While not essential for the application of the casing around the lamp, it will be convenient in practice to provide the latter with a section 4 consisting of one or two thicknesses which conform in contour to said recess and closely interfit therein, being secured in place by suitable means, such as screws or the like and being adapted to resist the passage of heat. At its upper end, such part preferably protrudes in a flange 5 which carries the roof 6 of the casing, which may be attached thereto by suitable screws 7 or the like. Such roof is so designed as to permit of a free discharge of the heated, vitiated products of combustion which rise through the channels 28 indicated in dotted lines in Fig. 1 provided by the lamp or burner portion, and, to that end, one or more gables or escape vents 8 may be provided, having openings, as at 9. A subsidiary ventilator 10 may be suspended from the under surface of the roof by means of a series of posts 11 and, preferably, such subsidiary ventilator will provide a circumferential vent 12 for the outflow of part of the gases. The lamp is so arranged as to directly underlie the aforesaid parts and discharge its waste gases toward the same. A horizontally extending baffle 29 surmounts the lamp and directs the gases toward said vent.

As it is desirable to have convenient access to the burner features, the intermediate or body portion of the casing, designated by 13, will be swiveled on a suitable hinge 14 to one side of the same and, at its other side, 15, will be provided with a suitable catch, which will normally retain said intermediate portion in a closed position. The said intermediate portion provides one or more openings 16 through which the light may pass, and said openings will ordinarily be closed against the flow of air by means of a suitable window 17, which may be of any suitable, transparent material. This window 17 is shaped to present a number of faces inclined upwardly toward the wall so that the whole unit has somewhat the appearance of a pyramid. As, however, the most convenient material for the purpose is glass, and as the same is likely to crack spontaneously under the influence of excessive heat or jarrings, this invention proposes, as a preventive, an interposed packing-ring 18 of asbestos or other suitable material, which commonly will overlap the edges of the window which rests in suitable seats provided by the intermediate casing portion.

The window may be held in place through the instrumentality of clips of suitable construction, such as those shown on the drawing and designated by 19, said clips being securely affixed to the intermediate portion, as by means of screws 20 or the like. This window is therefore enabled to be removed as an entirety, thereby greatly facilitating cleaning.

The intermediate portion, which constitutes a swinging door, will, in practice, be provided with means co-acting to normally maintain the same in a closed position, and such means will usually consist of a preferred type of spring-latch, such as that designated on the drawings by 21, in which an end 22 engages within a suitable seat in the swinging door.

The stop-cock 2 will be provided with an extension handle 23, which adapts the same for being actuated very conveniently. The bottom portion of the casing is denoted by 24 and provides suitable inlet orifices 25 for the inflow of fresh air. Such bottom portion will preferably be carried by suitable wings 26 extending from section 4 through a suitable attachment 27.

It will now be clear that the embodiment hereinbefore described is well adapted for attaining the objects and advantages above stated. The structure, as an entity, is particularly suitable for use in connection with the side walls of a room or other inclosure and, accordingly, is well fitted for railroad purposes. Certain characteristic advantages obtain as a result of the employment of a wall recess, as for example, economy of space and positive position. Furthermore, the construction permits of an artistic appearance and, to that end, the parts may be given a polygonal contour, as shown on the drawings.

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

1. An illuminating apparatus combining a wall having a recess in the face thereof, a lamp casing having a perforate top and bottom and having a back interfitting with said recess and securely positioned against said wall, a burner body providing upright escape channels for the products of combustion, a burner nozzle depending from said burner body, an inspirator connected with said burner body and positioned within said casing below the delivery ends of said escape channels and at one side thereof, and a globe having an apertured bottom surrounding said burner nozzle and positioned to enable fresh air to enter said casing through said perforate bottom and flow in a divided path partly within said globe toward said burner and partly exterior thereof and within said lamp casing toward the inspirator to supply the same with fresh

air, said burner being situated substantially equidistant from the front of said casing and the plane of said wall.

2. In an illuminating apparatus, a lamp casing consisting of a ventilated top, an apertured base, an intermediate portion, the latter being hinged and adapted to be swung in a horizontal plane and having a plurality of apertured faces disposed in an angular relationship, an integral window of transparent material having portions disposed in a corresponding angular relationship, said window being arranged to close all of the aforesaid apertured faces and means for detachably holding said window in position whereby the same may be readily replaced as an entity.

3. In an illuminating apparatus, a lamp casing consisting of a ventilated top, an apertured base, an intermediate portion having a plurality of openings disposed in angular relationship, said portion being hinged and adapted to be swung in a horizontal plane, an integral angular glass window carried by said portion, said window being co-extensive with said apertures and arranged to transparently close all of them and means located on the inclosed side of said hinged portion for detachably holding said window.

4. In an illuminating apparatus, a wall having a recess in the face thereof, a lamp casing interfitted with said recess and consisting of a ventilated top, an apertured base, an intermediate portion having a plurality of faces inclined upwardly toward said wall and having openings in the faces thereof, said intermediate portion being hinged and adapted to be swung in a horizontal plane, an integral glass window corresponding in contour to said intermediate portion and arranged to close all of the openings therein and attaching means enabling said glass window to be readily removed as a unit.

5. In an illuminating apparatus, a casing, a door pivoted thereto and having openings therethrough and provided with elongated seats positioned rearwardly and to the side of said openings, and a transparent integral window having its edges interfitted said seats whereby the remaining portion of the same is positioned a distance from said door to close all of said openings.

6. In an illuminating apparatus, a casing, a door pivoted thereto and having openings therethrough and provided with elongated seats positioned at the sides of said openings, a substantially transparent integral window having its edges interfitted in said seats to close all of said openings, and a relatively soft packing interposed between said edges and said seats, said packing being substantially trough-shaped.

7. In an illuminating apparatus, a wall provided with a tapering recess in the face thereof, a lamp casing affixed to said wall with its rear face interfitted with said recess, a layer of suitable heat insulating material interposed between said face and wall, a mantle lamp within said casing, and a horizontal deflecting plate surmounting said lamp and arranged to deflect the escaping products of combustion into a tortuous path.

8. In an illuminating apparatus, a lamp casing consisting of a ventilated top, a deflecting ring suspended a distance below said top thereby providing an air space for the escape of products of combustion both from under and through said top, an apertured base, and an intermediate portion, the latter being hinged and adapted to be swung in a horizontal plane.

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

ROBERT M. DIXON.

Witnesses:

A. C. MOORE,
H. K. WILLIAMS.