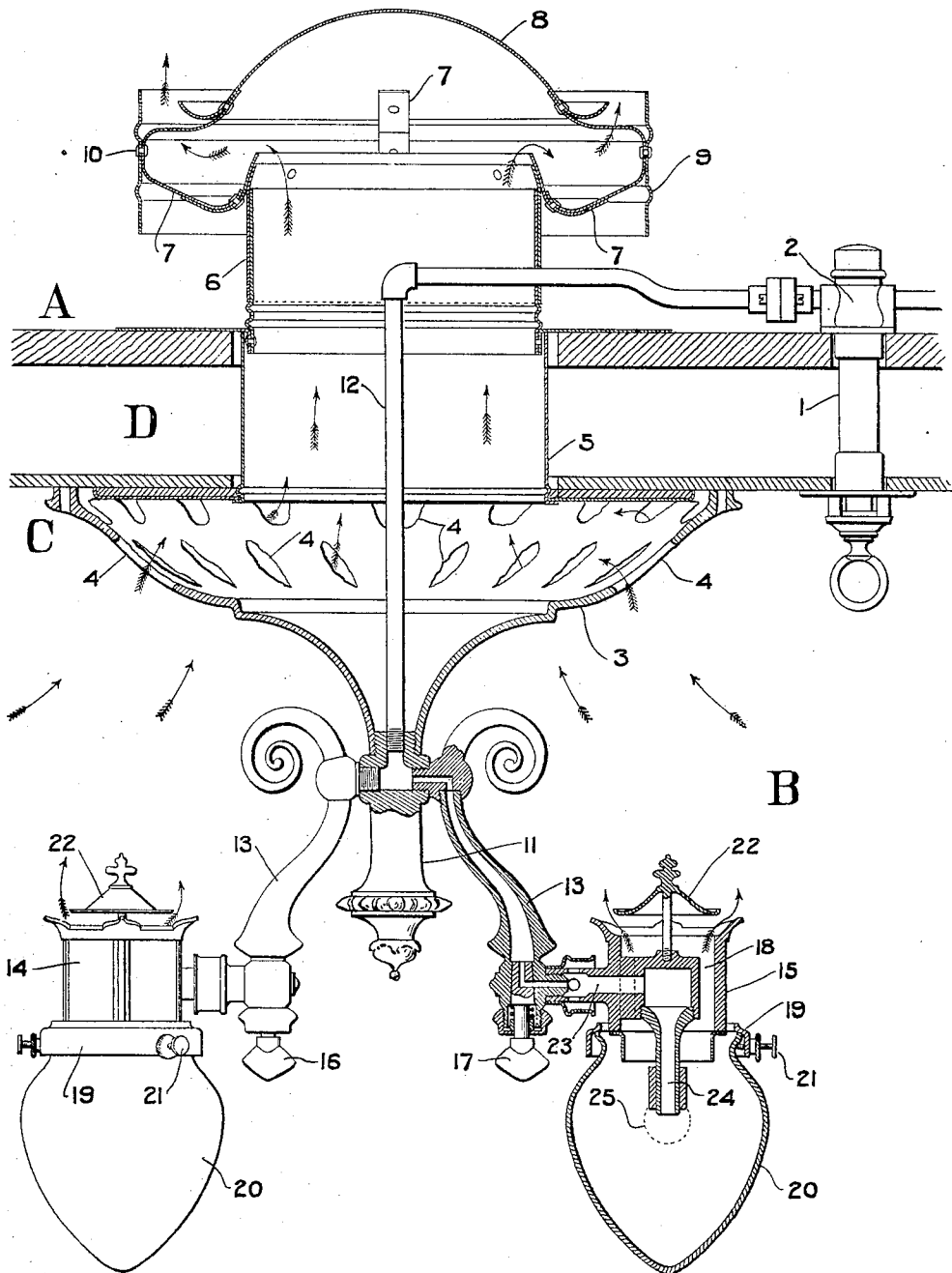


No. 814,121.

PATENTED MAR. 6, 1906.

R. M. DIXON.  
GAS LAMP.

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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-LAMP.

No. 814,121.

Specification of Letters Patent.

Patented March 6, 1906.

Application filed April 15, 1905. Serial No. 255,847.

*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 certain new and useful Improvements in Gas-Lamps, 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 same.

10 This invention relates to gas-lamps and the like, and is especially adapted for use in connection with car-lighting systems, although capable of use as to various features, in a variety of relations.

15 One of the objects thereof is to provide a device characterized by increased efficiency, simplicity, and convenience.

Another object is to provide a device of the above type in which the products of combustion are disposed of without the employment of unsightly and undesirable conducting tubes or pipes.

20 Another object is to provide a simple means so constructed as to collect and conduct the products of combustion from a plurality of independent lamps.

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

25 The invention accordingly consists in the features of construction, combinations of elements, and arrangement of parts, which will be exemplified in the device hereinafter described and the scope of the application of which will be indicated in the following claims.

The accompanying drawing represents an elevation, partly in section, of one of the various possible embodiments of my invention.

30 As tending to render better understood certain features of my invention it may here be noted that gas-lamps of this type discharge products of combustion in their operation, which products it is necessary to conduct to the exterior of the railway-car or similar structure in which said lamps are employed. 45 In prior constructions it has been proposed to provide for the disposition of these products of combustion by the employment of a separate tube or conduit for each lamp, thus rendering the structure expensive to manufacture and cumbersome and unsightly in appearance. The above and other defects are remedied in constructions of the nature of that hereinafter described.

Referring to the drawing, the roof A of the railway-car B or similar structure has arranged beneath the same a ceiling C, forming therebetween a space D, which is ordinarily known as a "dead-air" space, and extending through the ceiling C and roof A and adapted to be operated from the interior is a main gas-regulating means 1, connected to a supply-conduit 2. A ceiling-plate 3, preferably substantially cone-shaped, as shown, provided with a series of apertures 4 and secured by suitable means to the ceiling C, is adapted to collect products of combustion and lead them into a conducting-tube 5, through which said products are conducted, and thence into a chimney surmounting said conducting-tube, from which they pass into the atmosphere. A spider 7, carrying a deflector 8, is mounted upon the chimney 6 and is encircled by an annular collar 9, which is secured thereto by suitable means 10 and is designed to increase the draft through said chimney 6 and to allow the passage of the products of combustion between the same and the deflector 8. A fitting 11, into which leads a gas-supply tube 12, is supported by the ceiling-plate 3 and carries, by means of tubes 13, the lamps 14 and 15, which are adapted to be independently regulated by means of supply-cocks 16 and 17.

35 While I do not intend to limit myself to any particular type of lamp, I have in this instance illustrated a form adapted for use with an incandescent mantle. The lamp-body, provided with a passage-way 18, supports, by means of a flanged collar 19, a translucent dome 20, detachably secured thereto by suitable means, as the set-screws 21. A mixing-chamber surmounted by a deflector 22 is located in the body of the lamp and is adapted to deliver the gas conducted therein by the mixing-tube 23 into a burner-nozzle 24, carrying a suitably-secured mantle 25. 95

While in this embodiment of my invention I have shown two lamps, I wish it to be understood that I do not intend to limit my invention to any definite number, it being equally applicable to one or any number of lamps. The lamps above described form no essential part of my invention and may be of any type, and they are merely pointed out in order that the invention may be better understood. 105

With the several parts arranged substan-

tially as described the operation of this embodiment of my invention is as follows: As a current of air is continuously passing from the interior of the railway-car or similar structure through the apertures 4 in the ceiling-plate 3 and thence through the chimney 6 to the atmosphere, the heated products of combustion rising from the lamps 14 and 15 will come in contact with such currents and be carried with them. It may be noted that by reason of the ceiling-plate 3 being circular in shape, and its walls angularly disposed with respect to the ceiling there is formed at the said plate the apex of what may be termed an "inverted" funnel or hood by the hollow conical current of air passing there-through, and into this funnel the heated products of combustion are caught and conducted through the apertures 4 and thence through and out the chimney.

It will thus be seen that I have devised a lamp structure characterized by simplicity of construction and of slightly appearance. The products of combustion from a plurality of lamps are accommodated through a common outlet, and the cost of manufacture is thereby lessened; but I wish it to be understood that I do not intend to limit the application of my invention to incandescent gas-lamps nor, in fact, to any particular type of lamp. It is equally applicable to any construction requiring the conduction therefrom of products of combustion.

As many changes could be made in the above construction and many apparently widely-different embodiments of my invention could be made without departing from the scope thereof, I intend that all matter contained in the above description or shown in the accompanying drawings shall be interpreted as illustrative and not in a limiting sense.

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

1. In a device of the class described, in combination, means for producing an inverted-funnel-shaped current of air, means for delivering to the same products of combustion, and means for conducting said products from said first-mentioned means to the exterior of said device.

2. In a railway-car or similar structure, in combination, means for producing an inverted-funnel-shaped current of air, means for conducting said current of air to the exterior of said railway-car or similar structure, a plurality of means producing products of combustion and adapted to deliver said products of combustion into the inverted-funnel-shaped current of air through which said products pass into said first-mentioned means, and a single conducting-tube for conveying said products to the exterior of the railway-car or other structure.

3. In a railway-car or similar structure, in combination, one or more lamps each producing products of combustion, and means for producing an inverted-funnel-shaped current of air, said lamp or lamps being adapted to deliver their products of combustion into said funnel-shaped current of air through which said products pass into said first-mentioned means, and a single conducting-tube for delivering said products of combustion to the exterior of the railway-car or other structure.

4. In a railway-car or similar structure, in combination, one or more lamps each producing products of combustion, and means for producing an inverted-funnel-shaped current of air, said lamp or lamps being adapted to deliver the products of combustion into said funnel-shaped current of air, and means for conducting said products to the exterior of the car or similar structure.

5. In a railway-car or similar structure, in combination, one or more lamps each producing products of combustion, hollow apertured means for producing an inverted-funnel-shaped current of air, said lamp or lamps being adapted to deliver their products of combustion into said funnel-shaped current of air, and means for conducting said products of combustion to the exterior of the car or similar structure.

6. In a railway-car or similar structure, in combination, a plurality of independent separately-regulatable lamps each producing products of combustion, and means for producing an inverted-funnel-shaped current of air, said lamp or lamps being adapted to deliver their products of combustion into said funnel-shaped current of air.

7. In a device of the class described, in combination, a plurality of means producing products of combustion, and an apertured substantially cone-shaped ceiling-plate adapted to collect products of combustion from the plurality of means producing products of combustion.

8. In a device of the class described, in combination, a plurality of lamps, and an inverted substantially cone-shaped ceiling-plate adapted to collect the products of combustion from the lamps, and means adapted to conduct said products to the exterior of the device.

9. In a device of the class described, in combination, one or more lamps, an inverted substantially cone-shaped ceiling-plate provided with a plurality of apertures adapted to collect the products of combustion from said lamps, and means leading from the base of said cone-shaped ceiling-plate adapted to conduct the products of combustion from a lamp or lamps to the atmosphere.

10. In a device of the class described, in combination, a ceiling-plate provided with a plurality of apertures, a plurality of lamps mounted on said ceiling-plate and adapted

to discharge their products of combustion through an open space into said ceiling-plate, and means adapted to carry said products therefrom and thence to the atmosphere.

5 11. In a railway-car or similar structure, an inverted substantially cone-shaped ceiling-plate mounted therein and provided with a plurality of apertures, a plurality of lamps carried by said ceiling-plate and adapted  
10 to discharge their products of combustion through an open space to said ceiling-plate, and a chimney adapted to conduct the products of combustion to the exterior of said railway-car or similar structure.

15 12. In a railway-car or similar structure, in combination, an inverted, substantially cone-shaped ceiling-plate provided with a plurality of apertures along its conical wall adjacent the base thereof and having a closed lower  
20 portion, a plurality of lamps suspended from said ceiling-plate, said ceiling-plate and said lamps being separated by an open space, said ceiling-plate being adapted to collect the

products of combustion in said lamps through the apertures therein, and a chimney for conveying said products from said ceiling-plate and leading the same without the structure. 25

13. In a railway-car or similar structure, in combination, a ceiling-plate provided with a series of angularly-arranged openings and having a depending closed portion, a plurality of lamps suspended from said ceiling-plate, said ceiling-plate and said lamps being separated by an open space, said ceiling-plate being adapted to collect the products of  
30 combustion from said lamps through the apertures therein, and a chimney for conducting said products from said ceiling-plate and leading the same without the structure. 35

In testimony whereof I affix my signature 40 in the presence of two witnesses.

ROBERT M. DIXON.

Witnesses:

A. C. MOORE,

ELMER E. ALBEE.