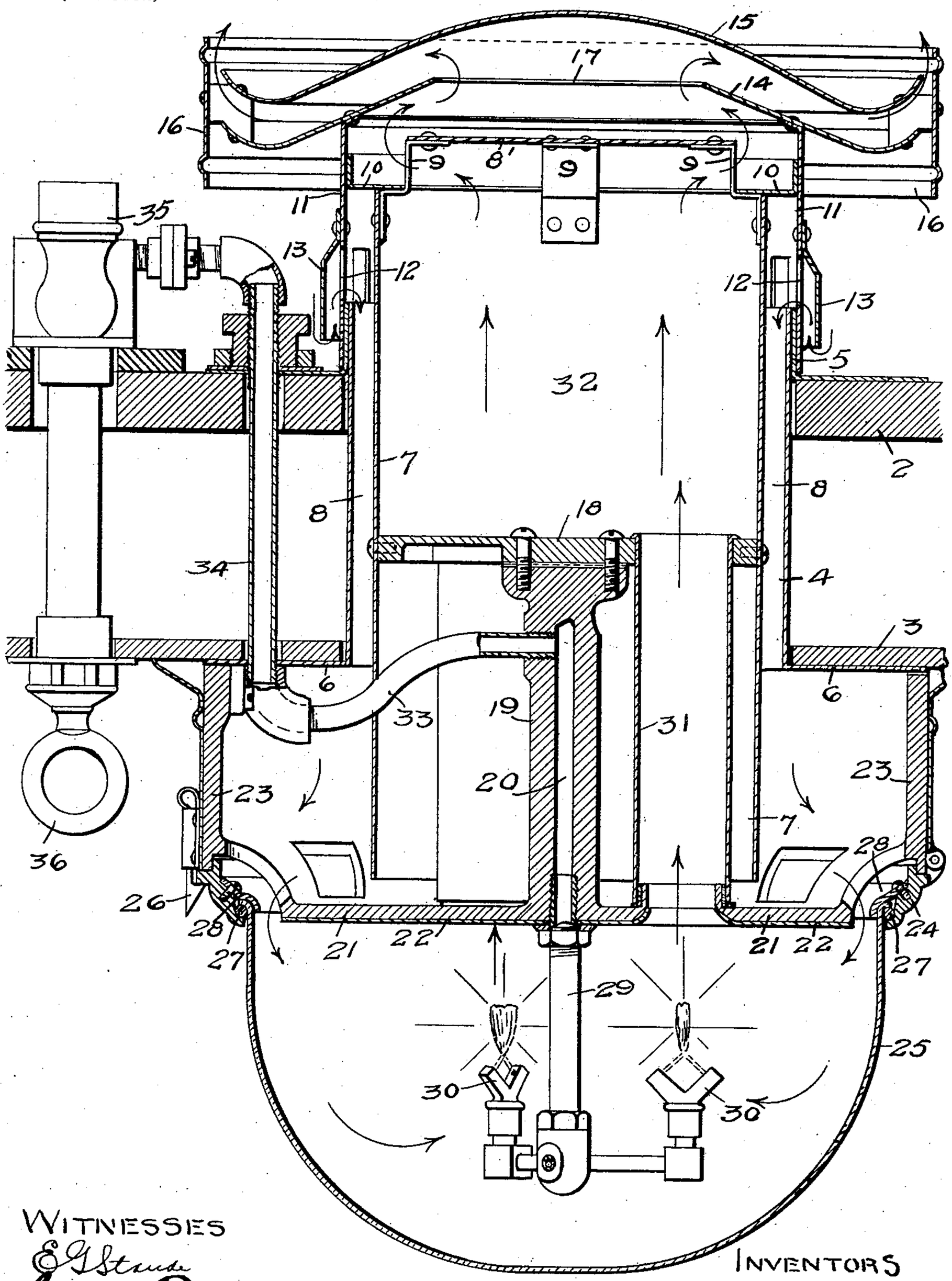
No. 672,880. Patented Apr. 23, 1901.

M. TOLTZ & A. LIPSCHUTZ.

CEILING LAMP.

(No Model.) (Application filed Mar. 19, 1900.)



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MAX TOLTZ AND ARTHUR LIPSCHUTZ, OF ST. PAUL, MINNESOTA.

CEILING-LAMP.

SPECIFICATION forming part of Letters Patent No. 672,880, dated April 23, 1901.

Application filed March 19, 1900. Serial No. 9,174. (No model.)

To all whom it may concern:

Be it known that we, MAX TOLTZ and ARTHUR LIPSCHUTZ, of St. Paul, Ramsey county, Minnesota, have invented certain new and useful Improvements in Ceiling-Lamps, of which the following is a specification.

This invention relates to gas-lamps, and particularly to ceiling-lamps for railway-coaches.

One object of the invention is to provide a gas-lamp for railway-coaches which will remain lighted regardless of drafts within the car.

Another object of the invention is to provide a car-lamp which neither draws air from the car nor emits products of combustion into the car.

A further object of the invention is to simplify and cheapen the construction of ceiling or hanging lamps for railway-coaches.

The invention consists generally in a ceiling-lamp of the construction and combination of parts all as hereinafter described, and particularly shown in the drawing, illustrating our lamp in vertical section.

In the drawing, 2 represents the roof of the car, and 3 the car-ceiling.

4 is a pipe extending through the ceiling and through the roof and a short distance above the same forming a joint with the T 5, that is arranged upon the roof as a watershed.

6 is a protecting-flange at the lower end of the pipe 4. Within the pipe 4 is a longer pipe 7, and between the two pipes 4 and 7 is an annular space or duct 8. The pipe 4 is partly closed at its upper end by the plate 8′, supported upon the brackets 9, so as to leave a free outlet beneath the plate 8′. The annular duct 8 is closed at the top by the ring 10, which joins the collar 11 of the lamp-hood. The collar or short pipe 11 is fastened down over the T 5, and in the sides of the part 11 are a series of air-inlet holes 12, which latter are protected by the downwardly-extending flange or sleeve 13. A space is left between the lower edge of the sleeve 13 and the roof in order to allow the free entrance of air into the space within the sleeve 13, and thence through the openings 12 into the annular duct 8. The hood proper may be of any desired construction, but preferably comprises the two disks 14 and 15, arranged within the deflector-ring 16. The disk 14 is provided with a large central opening 17, from which products of combustion from the lamp flow downward and outward between the edges of the disk and the ring 16. Within the pipe 7 is a disk or plate 18, securely attached thereto and from which depends the center post 19, within which is a gas-duct 20. A spider or plate 21 is provided at the lower end of the post 19 for the support of the reflector 22. The base-ring 23, which depends from the ceiling of the car, is preferably integral with the spider 21 and supports the ring or frame 24, in which the glass globe 25 is secured. The frame-ring 24 is hinged to the base-ring 23 at one side and is secured at the other side by a latch 26. The frame-ring 24 forms a tight joint with the lower edge of the frame-ring 23, and said ring and the collar finish thereon are drawn tightly up against the ceiling, so that no air-openings are left. To prevent leakage of air between the edge of the globe and the frame-ring 24, we preferably introduce the packing-ring 27, and the globe is pressed tightly thereon by a fastening-ring 28 within the frame-ring 24.

29 represents the gas-pipe leading from the gas-duct 20 and at the lower end of which several arms are provided for the gas-burner tips 30.

The reflector 22 and the spider above the same and the plate 18 are provided with as many holes as there are gas-tips, the same being directly above the gas-tips, and the plates 18 and 21 are joined by the connecting-flues 31, which lead into the space 32 within the pipe 7 above the plate 18. Gas is supplied to the duct 20 through the pipe 33, from which a pipe 34 leads up through the roof of the car to the supply-pipe 35 upon the roof of the car. 36 represents a valve-stem which drops from the roof through the ceiling of the car, so that the valve may be operated from within the car. We prefer that the reflector shall be a plain surface and that the same shall be in substantially the same plane as the upper edge of the globe.

The operation of the lamp is as follows: The gas being turned on, the globe is unlatched and the gas is ignited at the tips. The products of combustion rise through the flues into

the space 32 and pass out under the plate 8' into the tortuous passages of the hood, and thence escape into the open air. Meantime the gas-flames are supplied with air entering through the holes 12 and falling through the annular duct 8 into the space within the base-ring 23, and thence downward through the openings between the arms of the spider 21 at the edge of the reflector 22. The air naturally falls upon the walls of the globe and to the bottom thereof, rising thence to the gas-jets. In this manner the gas-flames are maintained without direct supply of air and are entirely removed from the influence of sudden drafts or winds.

Having thus described our invention, we claim as new and desire to secure by Letters Patent—

1. The combination, in a ceiling-lamp for railway-coaches, of a pipe 4 projecting through the top of the car and having air-inlet openings in its walls above said top, a pipe 7 provided within said pipe 4, a space being provided between said pipes communicating with said air-inlet openings and forming an air-inlet duct, a hood or watershed provided over said pipes 4 and 7 and having a tortuous passage communicating with said pipe 7, means for closing the space between said pipes above said air-inlet openings, a globe supported beneath said pipes and closed against entrance of air from the car, a burner or burners provided in said globe, and a plate provided above said burners and having openings communicating respectively with said pipe 7 and said air-inlet duct, substantially as described.

2. In a ceiling-lamp, the combination, with a pipe 4 having air-inlet openings 12, of a pipe 7 provided within said pipe 4 and spaced from the walls of the same forming an air-inlet duct, a hood provided on said pipe 7 and having a tortuous passage communicating therewith, means for closing the space between said pipes 4 and 7 above said openings 12, a globe closed against entrance of air provided beneath said pipe 7, a burner or burners provided within said globe, a plate provided above said burners and having openings communicating respectively with said pipe 7 and with said air-inlet duct, substantially as described.

3. The combination, with a pipe 7, of a hood thereon having a tortuous passage communicating therewith, a plate provided within said pipe 7, burners suspended therefrom, a globe inclosing said burners, flues provided above said burners and communicating with a space above said plate and with said tortuous passage, and an independent inlet air-duct through which air is admitted into said globe, substantially as described.

4. The combination, in a ceiling-lamp for railway-coaches, of a pipe projecting through the top of the car and having air-intake holes, a second pipe concentric with said first-named pipe and spaced from the walls of the same, a hood or watershed provided over the outer ends of said pipes, means for closing the space between the walls of said pipe above said air-intake holes, a globe provided beneath the lower ends of said pipes, and closed against entrance of air from the car, a burner or burners provided in said globe, and a reflector above said burner provided with openings communicating respectively with the space between said pipes and with the interior of said second-named pipe, substantially as described.

5. The combination, in a ceiling-lamp for railway-coaches, of a pipe 7 projecting above the roof of the car, a hood provided on said pipe and having a tortuous air-passage communicating therewith, a globe provided over the inner end of said pipe and closed against the entrance of air from the interior of the car, burners provided within said globe, a plate 18 provided in said pipe 7, a post 19 depending therefrom, a spider at the lower end of said post, flues 31 connecting openings in said spider and said plate, a flat reflector-plate supported by said spider and having openings registering with the flue-openings therein, and an independent air-duct communicating with the open air and with the interior of said globe, substantially as described.

6. In a ceiling-lamp, the combination, with a pipe 7, of a plate 18 secured therein, a post 19 depending from said plate, burners supported by said post, a spider provided near the lower end of said post above said burners, flues 31 connecting openings in said spider and said plate and through which the products of combustion pass to the space within said pipe above said plate, a reflector beneath said spider having openings registering with the flue-openings therein, a globe inclosing said burners and closed against the entrance of air from the car, and an independent air-duct communicating with said globe, substantially as described.

7. In a ceiling-lamp, the combination, of a pipe 7 extending above the roof of the car, a watershed or hood provided thereon and having a tortuous air-passage communicating with said pipe, a plate provided in said pipe 7, a post depending therefrom, a gas-duct provided in said post, burners supported by said post and communicating with said gas-duct, a spider provided near the lower end of said post, flue-pipes connecting openings in said spider and said plate above said burners and through which the products of combustion are conveyed to the space above said plate, a reflector secured to said spider and having openings registering with the flue-openings therein, a globe inclosing said burners and closed against the entrance of air from the car, and an independent air-duct through which air is admitted into said globe, substantially as described.

8. The combination, in a ceiling-lamp for railway-coaches, of concentric pipes spaced from each other and projecting through the

roof of the car, a watershed or hood provided over the tops of said pipes and having a tortuous air-passage communicating with the inner pipe, air-inlet openings provided in the walls of the outer pipe between said watershed and the car-top, a ring 10 for closing the space between said pipes above said air-inlet openings, a globe supported beneath the lower ends of said pipes and closed against entrance of air from the car and communicating with the space between said pipes, burners provided in said globe, and a suitable reflector-plate arranged above said burners and having flue-openings through which the products of combustion pass up through said inner pipe to said tortuous passage, substantially as described.

In testimony whereof we have hereunto set our hands this 5th day of March, 1900.

MAX TOLTZ.
ARTHUR LIPSCHUTZ.

In presence of—
R. D. HAWKINS,
W. E. BARNACLE.