

No. 609,192.

Patented Aug. 16, 1898.

C. BERGENER.
BICYCLE LAMP.

(Application filed Oct. 27, 1896.)

(No Model.)

3 Sheets—Sheet 1.

Fig. 1.

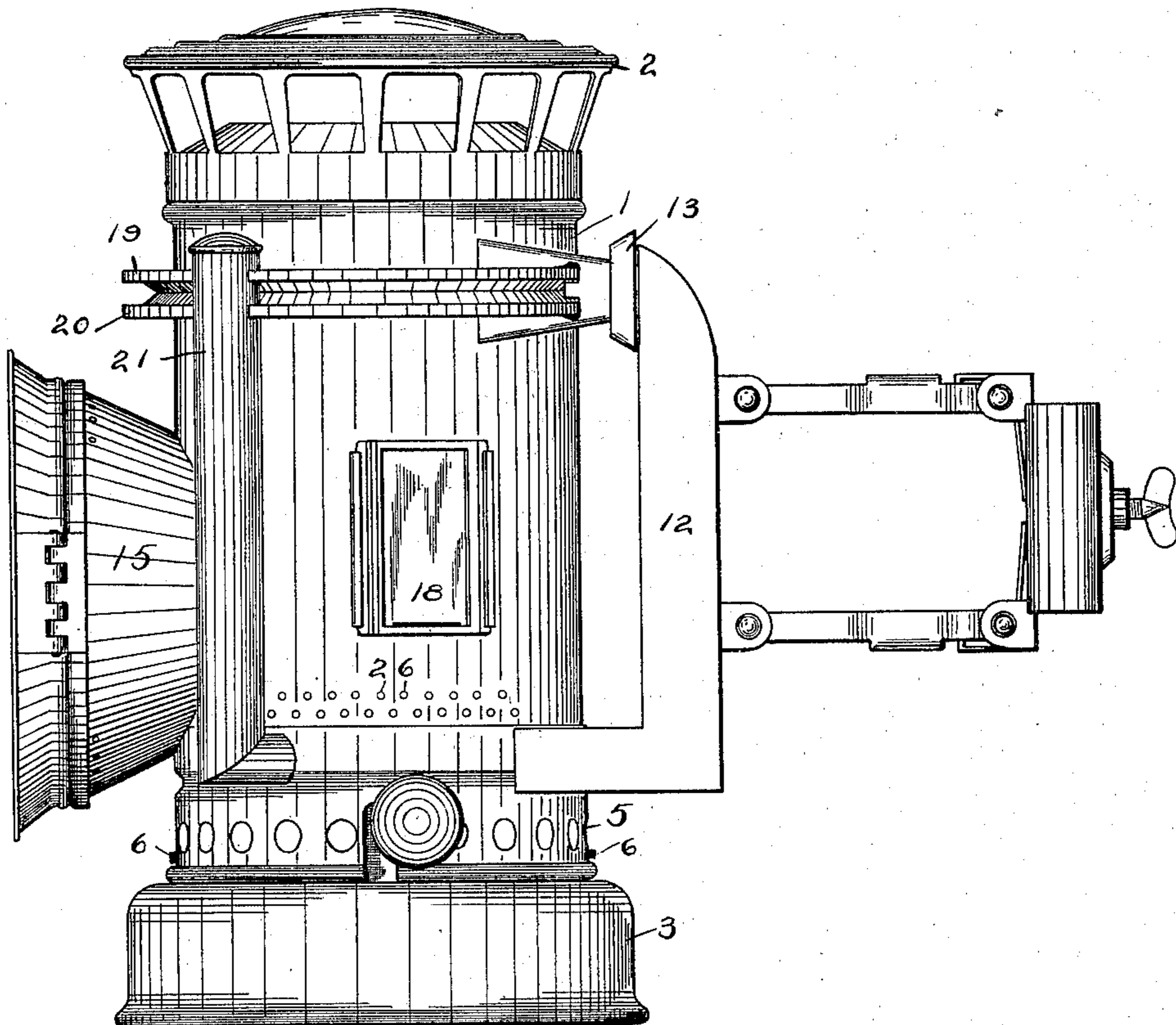
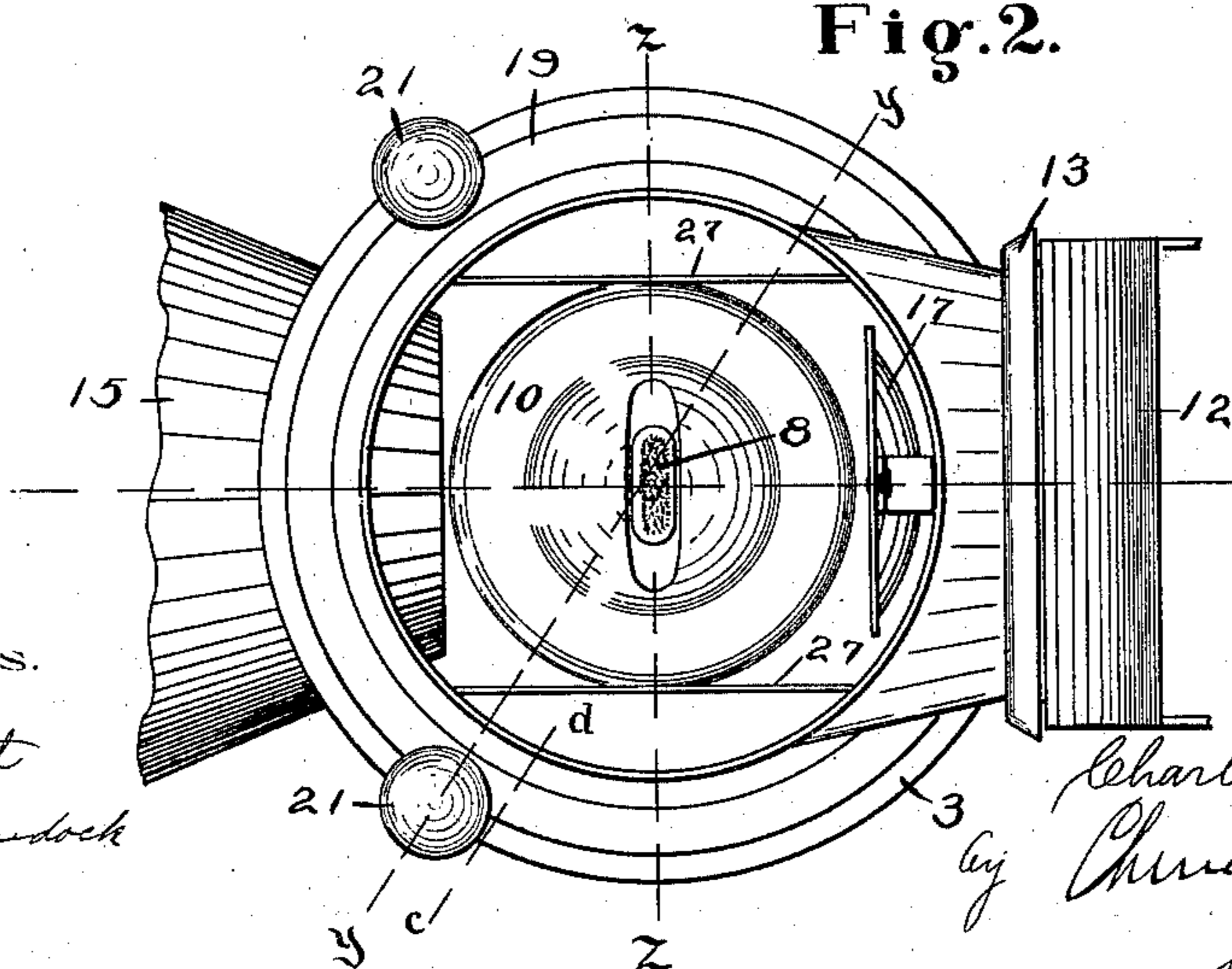


Fig. 2.



Witnesses.

Chas. Durant
Wallace Muddock

Inventor.

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Cuj Charles Bergener
Church Knuck
his Attorney S.

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Fig. 3.

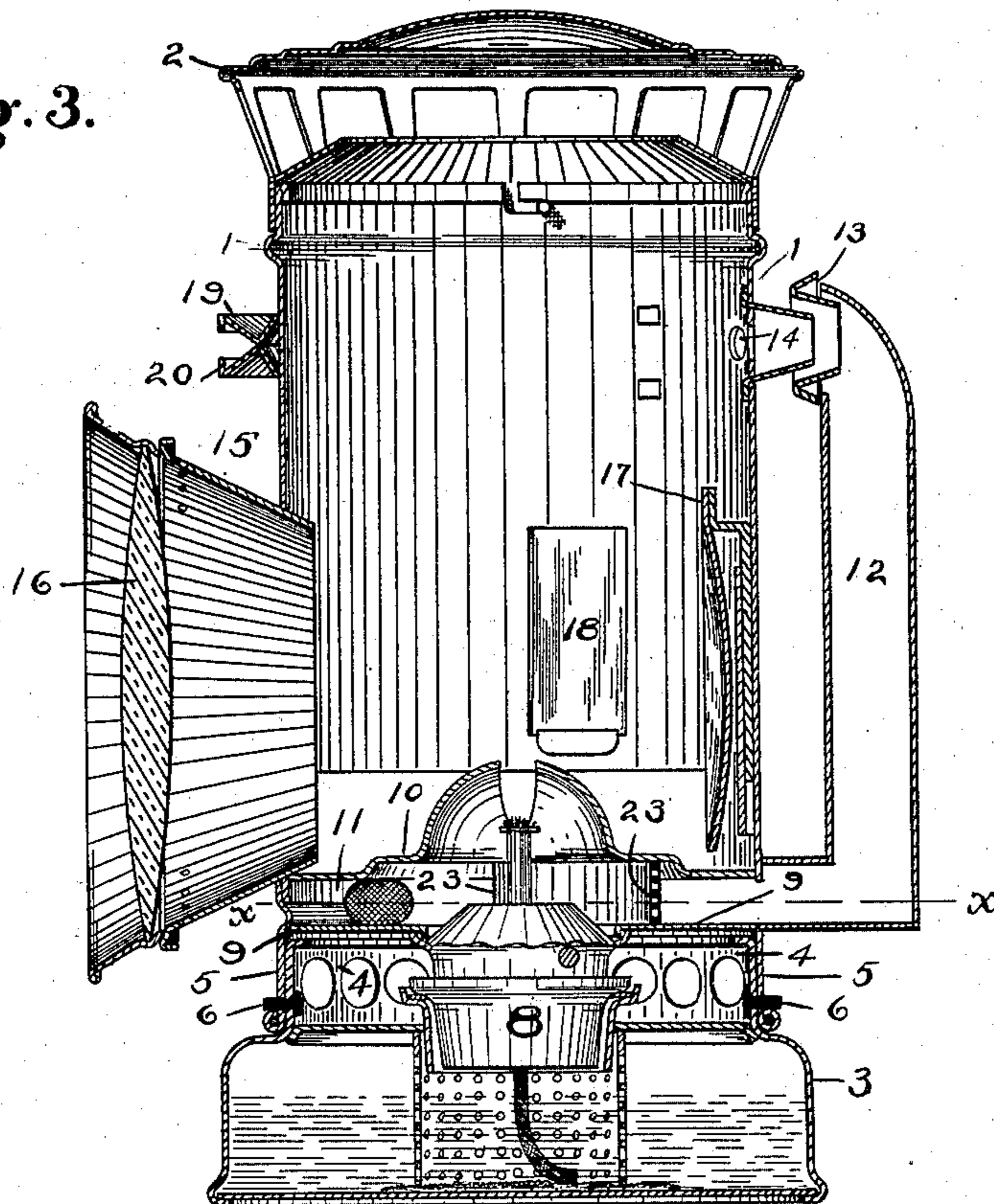
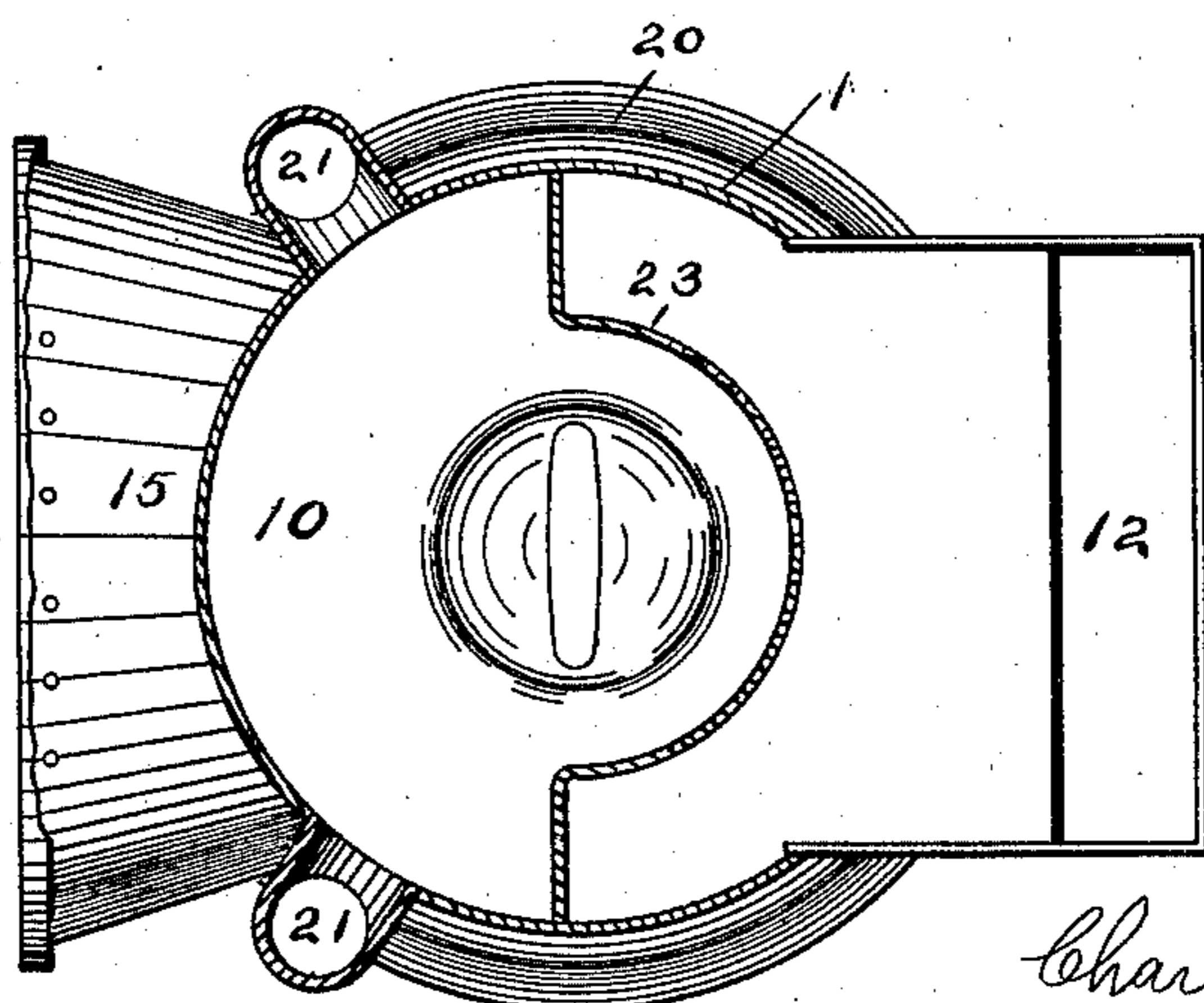


Fig. 4.



Witnesses.

Thos. Durant
Wallace Muddock

Inventor.

Charles Bergener,
By *Arthur H. Smith*
his Attorney.

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3 Sheets—Sheet 3.

Fig. 5.

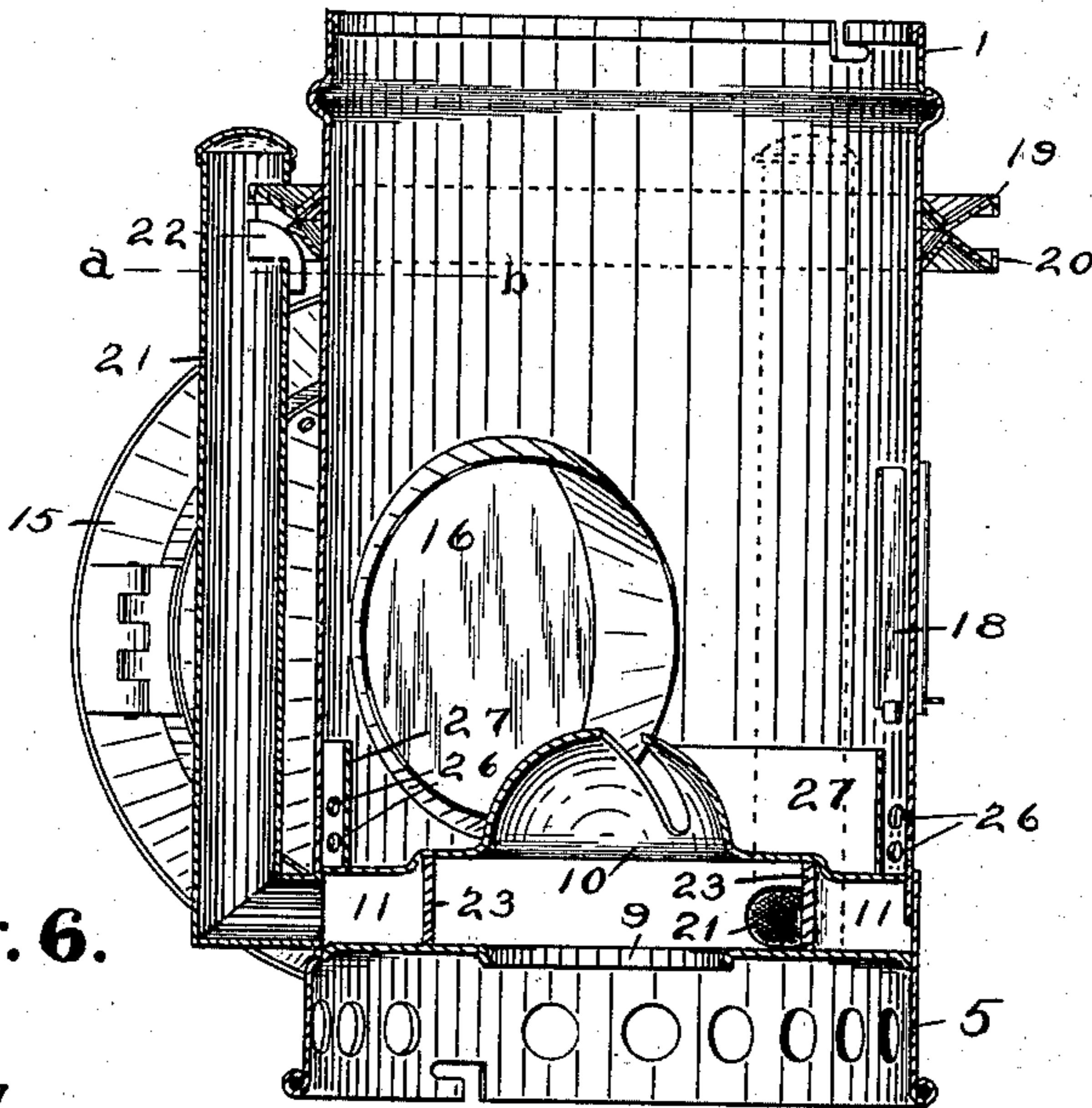


Fig. 6.

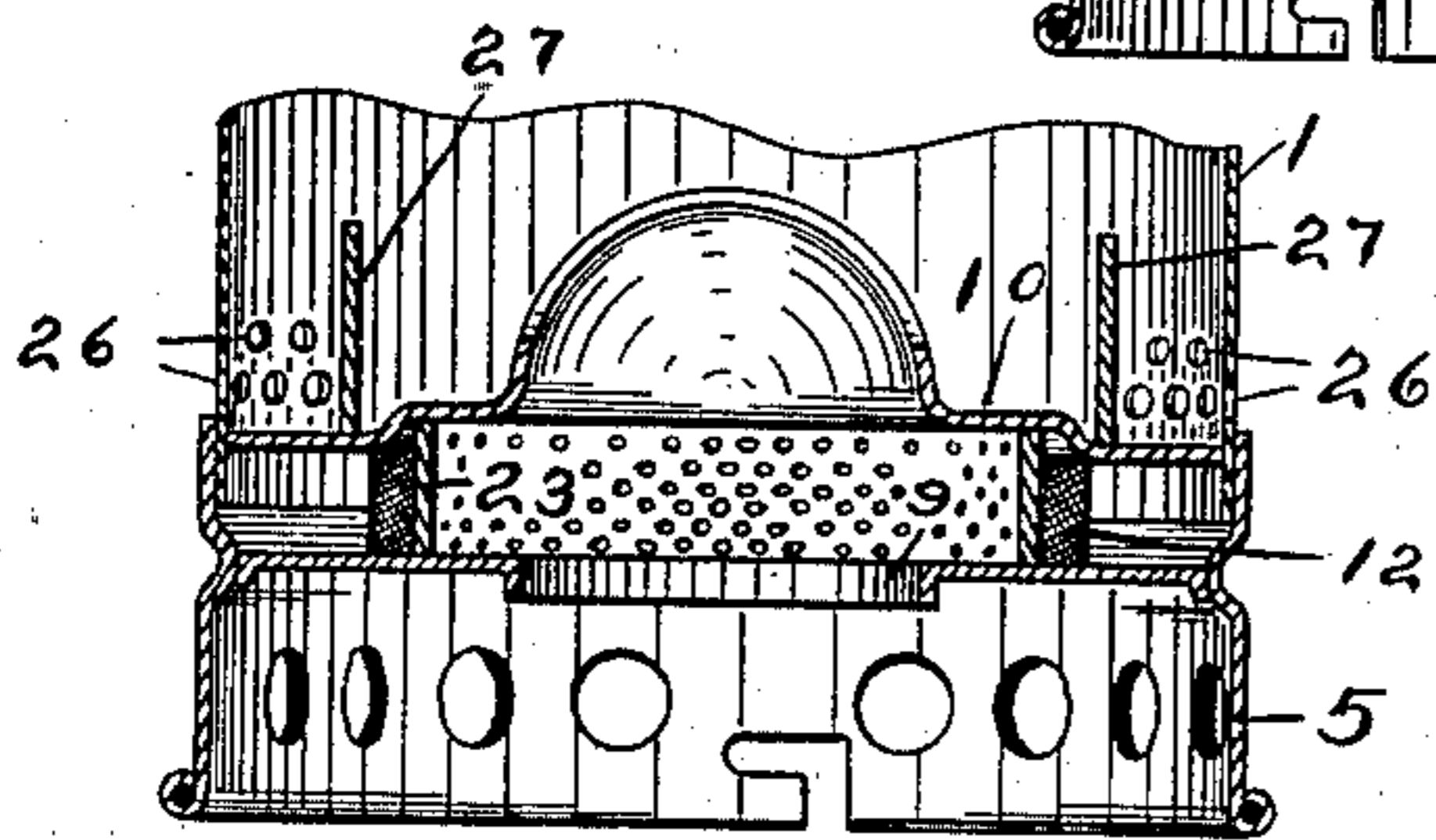


Fig. 7.

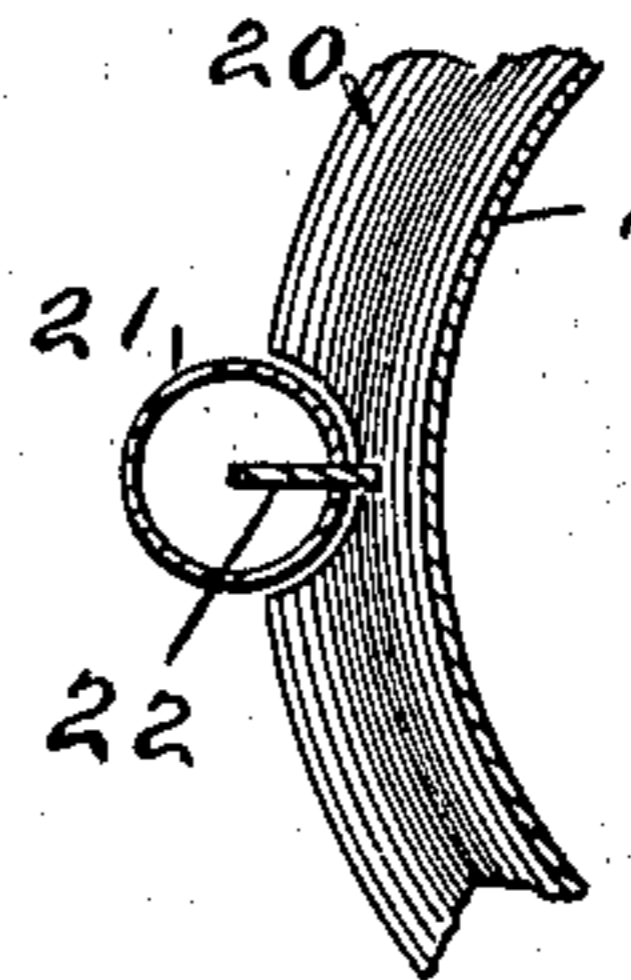
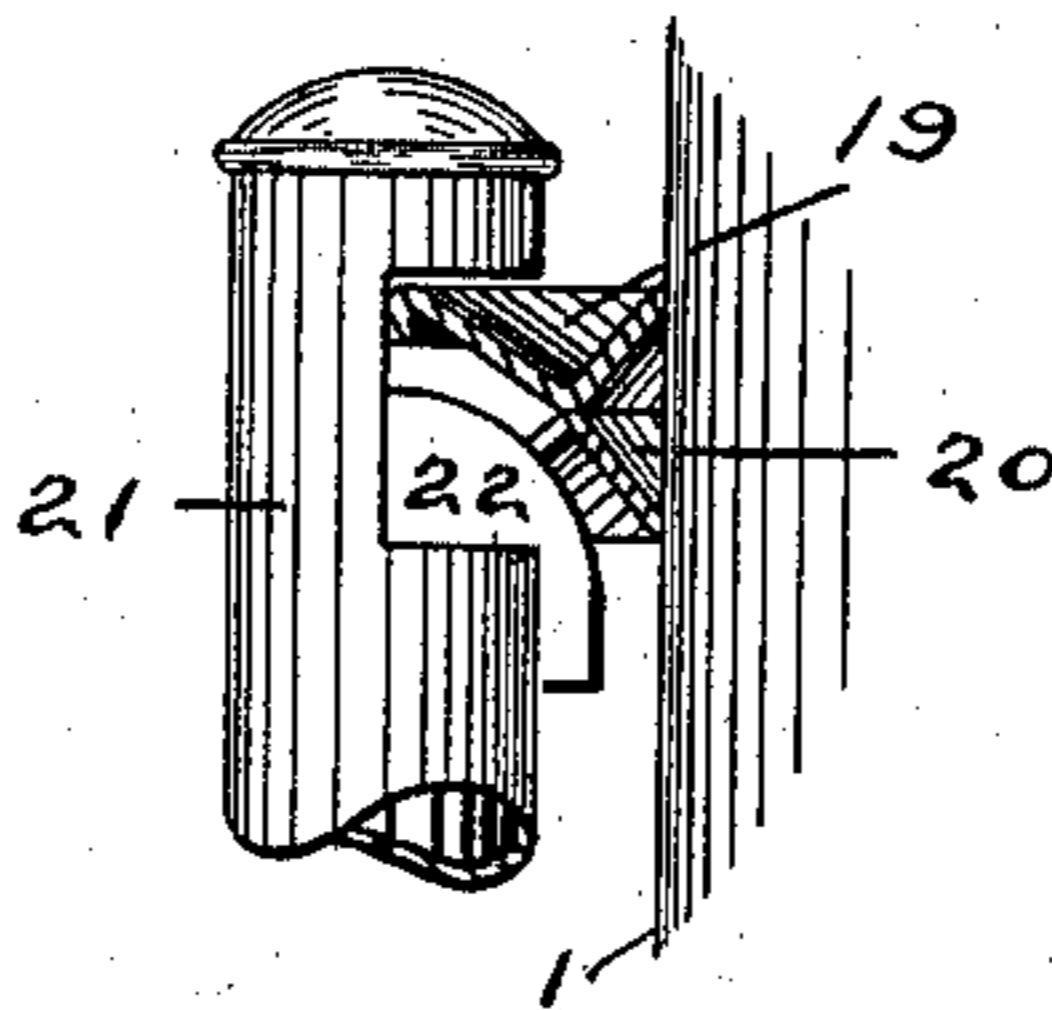


Fig. 8.



Witnesses.

Thomas Durant
Wallace Murdoch

Inventor.

Charles Bergener
by *Church & Church*
his Attorneys.

UNITED STATES PATENT OFFICE.

CHARLES BERGENER, OF ROCHESTER, NEW YORK, ASSIGNOR TO THE C. T. HAM MANUFACTURING COMPANY, OF SAME PLACE.

BICYCLE-LAMP.

SPECIFICATION forming part of Letters Patent No. 609,192, dated August 16, 1898.

Application filed October 27, 1896. Serial No. 610,207. (No model.) Patented in England December 15, 1896, No. 28,684, and in France April 17, 1897, No. 262,247.

To all whom it may concern:

Be it known that I, CHARLES BERGENER, of Rochester, in the county of Monroe and State of New York, have invented certain new and
5 useful Improvements in Bicycle-Lamps; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, and
10 to the reference-numerals marked thereon.

The subject-matter of this application is contained in British Letters Patent No. 28,684, dated December 15, 1896, and also in French Letters Patent No. 262,247, dated April 17,
15 1897.

My present invention relates to improvements in that class of lamps adapted to be used on bicycles or other vehicles, is an improvement upon the lamp shown in my pending application for Letters Patent, Serial No. 604,996, filed September 5, 1896, and has for its object to improve the construction and operation of said lamp, whereby the supply
20 of air to the burner beneath the burner-cone will be sufficient to cause the maximum flame whether the lamp be still and liable to be subjected to blasts of air from any direction or is moving in one direction and subjected only to the blast caused by the movement of the
25 vehicle; and to these and other ends the invention consists in certain improvements in construction and combinations of parts, all as will be hereinafter described, and the novel features pointed out particularly in the claims
30 at the end of this specification.

In the accompanying drawings, Figure 1 is a side elevation of a lamp constructed in accordance with my invention; Fig. 2, a plan view of the same with the top section removed; Fig. 3, a central vertical sectional view; Fig. 4, a horizontal sectional view on the line *xx* of Fig. 3; Fig. 5, a vertical sectional view on the line *yy* of Fig. 2; Fig. 6,
35 a sectional view on the line *zz* of Fig. 2, showing the bottom portion of the central section of the lamp only; Fig. 7, a section on the line *ab* of Fig. 5, looking upward; Fig. 8, a section on the line *cd* of Fig. 2.

Similar reference-numerals in the several
40 50 figures indicate similar parts.

As in the lamp shown in my prior application, the present invention embodies generally a tubular body 1, having a removable top 2, connected to the body by a bayonet or other suitable catch, as shown, and at the
55 bottom a removable oil-pot 3, having an upwardly-extended perforated flange 4, entering a correspondingly-perforated flange 5 on the body, the flanges being connected by studs 6, entering suitable slots formed in one
60 of the flanges, whereby an air-space will be formed between the top of the oil-pot and a plate 9 in the body.

8 indicates an ordinary slip-burner resting in the oil-pot and held in position by having
65 its upper portion engaging with a bottom plate 9, between which and the burner-cone 10 is formed an air-chamber 11. At the rear of this air-chamber is an upwardly-extending air-tube 12, having an injector 13 at its up-
70 per end, and suitable holes 14 are provided in the upper portion of the body opposite the entrance to the injector. The front of the body is provided with a goggle 15, in which is located a window, or, preferably, a lens 16,
75 and behind the burner is a removable reflector 17. The sides of the body are also provided with the usual windows 18, one or both of which is adapted to be opened for the purpose of lighting the wick.
80

Extending around the body of the lamp and preferably in the plane of the injector 13 is an air-director composed of plates 19 and 20. The channels in the top and bottom of this director and the passage between the over-
85 hanging edges of the two plates communicate with the end of the injector 13, as in my prior application.

21 indicates tubes extending vertically on opposite sides of the goggle or front of the
90 lamp and communicating at their lower ends with the air-chamber 11 beneath the burner-cone. Their extreme upper ends are closed, though openings are formed in the sides next the body into which the edges of the plates
95 19 and 20 enter, and in the upper end of these tubes are provided small dividing-plates 22, extending part way across the air-passage formed between the plates 19 and 20 of the air-director and extending below said direc-
100

tor a short distance between the tube and the body of the lamp, as shown particularly in Figs. 5 and 7, the construction being such that as the lamp moves forward a portion of the air in the central channel of the annular air-director and beneath the same will be deflected down the tubes 21 to the chamber 11 beneath the burner-cone, and also when the lamp is at rest or in motion a portion of the air striking the side of the lamp will pass through the tube 12 and also down the tubes 21, being deflected therein by the plates 22 between the plates 19 and 20 and below the latter, so that there will always be a sufficient supply of air beneath the burner-cone to support combustion and produce the maximum flame.

In order that the air passing down the tube 12 may not impinge directly upon the flame, I provide in the chamber 11 a perforated guard or deflecting plate 23, extending partially around the burner-opening and between the latter and the opening of the rear tube 12 and connecting with the body at the sides, whereby the current of air descending through the tube 12 will not impinge directly upon the flame, but will be divided and distributed in the chamber in the best manner. The exact location and construction of this deflecting-plate 23 is not essential, excepting that it shall be disposed in such manner as to prevent the direct blast of air from tube 12 upon the flame, although I prefer the arrangement shown, as I find in practice that it is desirable.

The sides of the lamp-body 1 are perforated at 26 in order to afford a supply of air above the burner-cone, and inside of the body I arrange vertical plates 27 to prevent the air entering these perforations from impinging directly upon the flame.

I do not claim herein the construction of the lower part of the lamp-body and the oil-pot attached in the manner described, as this is claimed in my pending application, Serial No. 611,385, nor do I claim herein the combination of the body, director, and a single air-tube at the rear having the injector at the top, as this is claimed in my pending application, Serial No. 604,996.

I claim as my invention—

1. In a lamp, the combination with the body, the burner, the burner-cone, and the air-chamber beneath the burner-cone, of the

rear air-tube separated from the body and having the injector at its upper end and communicating with the air-chamber, and the side tubes closed at their upper ends and also connected to the air-chamber and having the openings and the dividing-plates therein, substantially as described.

2. In a lamp, the combination with the body having the window at the front, and the air-tube at the rear separated from the body and having the injector at the top, of the burner and its cone, the air-chamber beneath the cone with which the rear tube connects, the air-director extending around the lamp-body, the separate side tubes having the closed upper ends and connected with the air-chamber and having the openings in proximity to the air-director, substantially as described.

3. In a lamp, the combination with the body, the burner and cone, and the air-chamber beneath the latter, of the rear air-tube separated from the body, having the injector at its upper portion and communicating with the air-chamber and also with the body above the burner, the side tubes closed at their upper ends and open near said ends on the side next the body and having the dividing-plates in said openings, and an annular air-director cooperating with the side and rear tubes.

4. In a lamp, the combination with the body having the window at the front, the burner, the burner-cone, and the air-chamber beneath the cone, of the rear air-tube having the injector at its upper end, the air-director having the upper, lower and intermediate air-channels, the side tubes connected to the air-chamber having the openings at their upper ends, and the dividing-plates in the openings, substantially as described.

5. In a lamp, the combination with the lamp-body having the window, the burner, the burner-cone, and the air-chamber beneath the latter, of the side air-tubes having the closed upper ends and communicating with the air-chamber and open at their upper portions on the sides next the lamp-body, the vertical dividing-plate in said openings, and the horizontal air-director having an annular passage and the channeled lower side, substantially as described.

CHARLES BERGENER.

Witnesses:

F. F. CHURCH,
G. A. RODA.