(No Model.)

F. RHIND.

BICYCLE LANTERN.

No. 559,946. Patented May 12, 1896.

Fig. 1.

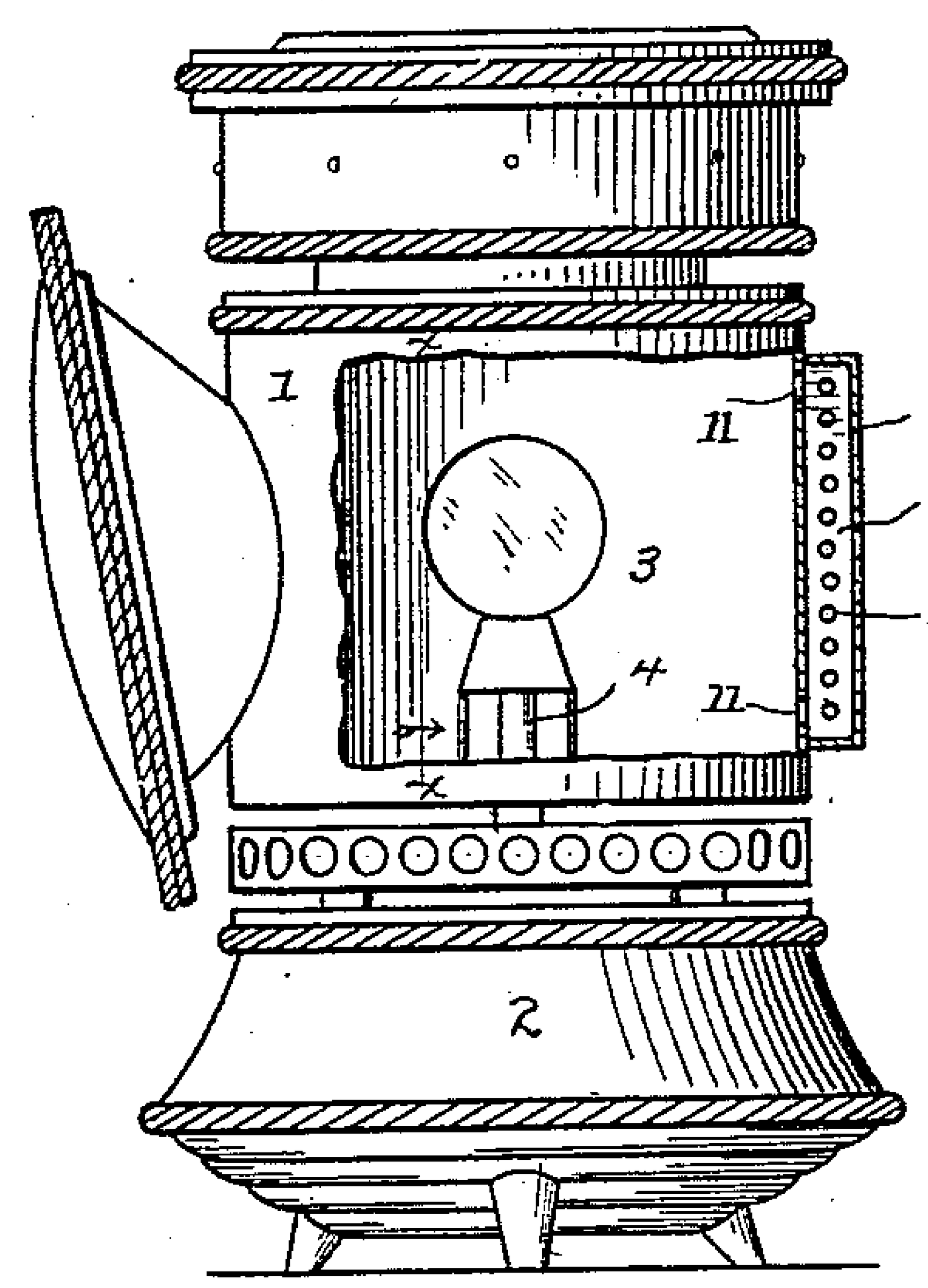
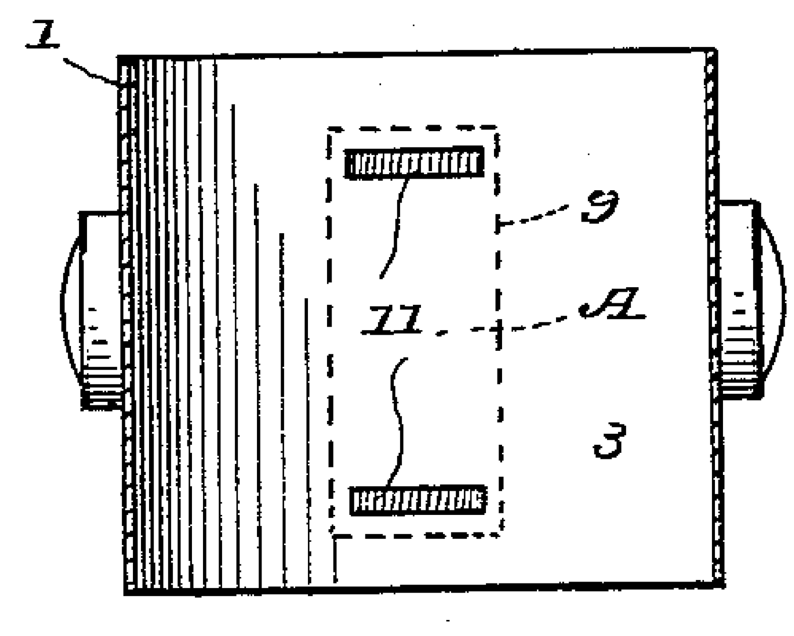


Fig. 2.



WITNESSES

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FRANK RHIND, OF MERIDEN, CONNECTICUT, ASSIGNOR TO THE BRIDGEPORT BRASS COMPANY, OF BRIDGEPORT, CONNECTICUT.

BICYCLE-LANTERN.

SPECIFICATION forming part of Letters Patent No. 559,946, dated May 12, 1896.

Application filed April 26, 1895. Serial No. 547,211. (No model.)

To all whom it may concern:

Be it known that I, FRANK RHIND, a citizen of the United States, residing at Meriden, in the county of New Haven and State of Connecticut, have invented certain new and useful Improvements in Bicycle-Lanterns; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to bicycle-lanterns, and has for its object to provide a construction which shall insure that air admitted at the back shall pass to the combustion-chamber both above and below the flame, thus equalizing the air-currents, so that danger of the flame being extinguished by sudden and powerful drafts shall be wholly done away with.

With this end in view I have devised the novel construction of which the following description, in connection with the accompanying drawings, is a specification, numbers and letters being used to designate the several parts.

Figure 1 is a side elevation of a bicycle-lantern, the shell being partially broken away to illustrate the manner in which I have carried my invention into effect; and Fig. 2 is a section on the line *y y* in Fig. 1, looking toward the back.

My invention consists in the construction substantially as hereinafter described and claimed.

1 denotes the body of the lantern; 2, the reservoir; 3, the combustion-chamber, and 4 the burner, which may be of any ordinary or preferred construction and which lies within the combustion-chamber.

11 denotes openings in the back of the combustion-chamber near the top and bottom thereof, the essential principle being that these openings shall be located above and below the burner and only at the back, so that air entering the combustion-chamber at these openings will enter above and below the flame simultaneously and without undue force due to side draft, thus equalizing the currents in the combustion-chamber. In other words, air must pass into the combustion-chamber at both top and bottom thereof, so that the downward current from the opening 11 near the top of the combustion-chamber, which would tend to extinguish the flame, is equalized by the current entering the opening 11 near the bottom of the combustion-chamber, which moves upward, so that the flame is practically unaffected by the currents. This equalization of the air-currents insures a steady flame and prevents flickering under all ordinary and extraordinary conditions. In order to insure that strong currents of air shall not enter the combustion-chamber at either of the openings 11, and also to insure that the passage of strong currents of air across the body on the outer side thereof will not produce the effect of exhausting air from the combustion-chamber and cause an outward current which would make the flame unsteady, I provide an air-duct A, consisting of back, side, top, and bottom walls, (indicated by 9,) said duct being located entirely at the back of the body 1. The side walls of this duct are located close to the ends of openings 11, and are shown as provided with openings 10 for the passage of air into the duct. The effect of these openings, however, is to break up any strong air-currents. The air in fact enters the duct at any or all of the openings 10, but can pass from the duct into the combustion-chamber only at the openings 11 at the top and bottom thereof, there being in fact two currents, and only two, entering the combustion-chamber from the duct at all times, one above the flame and the other below and only at the back of the lantern, thus equalizing the currents at the burner and preventing the flame from flickering.

Having thus described my invention, I claim—

In a bicycle-lantern the combination with a body having two openings 11 at the back thereof, one of said openings being above and the other below the burner, of an air-duct A on the outer side of the body which covers said openings and consists of back, side, top and bottom walls, said side walls being located near the ends of openings 11 and being themselves provided with openings 10 for the entrance of air whereby outward currents from the combustion-chamber are prevented and currents entering the duct are broken up and are only permitted to enter the combustion-chamber from the rear and above and below the flame, the currents being thereby equalized and flickering of the flame prevented.

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

FRANK RHIND.

Witnesses:
A. M. WOOSTER,
S. V. RICHARDSON.