P. BUDENBACH.

Locomotive Head Lamp.

No. 51,135. Patented Nov. 28, 1865.

Fig. 1.

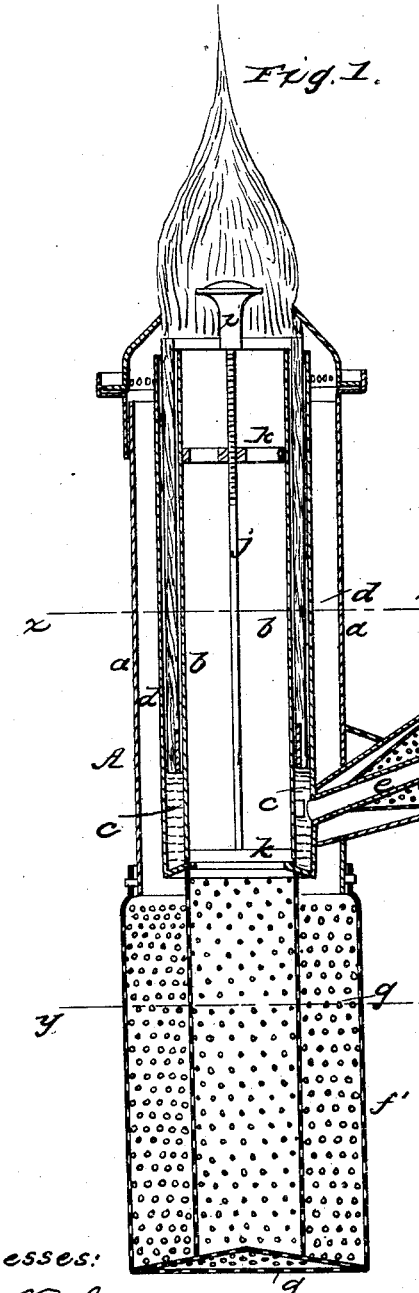


Fig. 2.

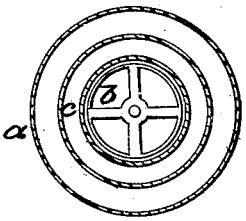
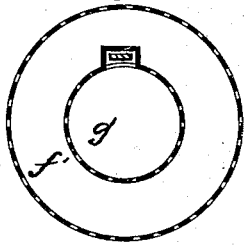


Fig. 3.



Witnesses:

J. W. B. Covington

Wm. Thurn

Inventor:

P. Budenbach

by Munn & Co

Attys

UNITED STATES PATENT OFFICE

PETER BUDENBACK, OF NEW YORK, N. Y.

IMPROVEMENT IN LOCOMOTIVE HEAD-LAMPS.

Specification forming part of Letters Patent No. **51,135**, dated November 28, 1865.

To all whom it may concern:

Be it known that I, PETER BUDENBACK, of the city, county, and State of New York, have invented a new and Improved Lamp-Burner; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 represents a vertical central section of this invention. Fig. 2 is a horizontal section of the same, the line *x x*, Fig. 1, indicating the plane of section. Fig. 3 is a similar section of the same, taken in the plane indicated by the line *y y*, Fig. 1.

Similar letters of reference indicate like parts.

This invention relates to a lamp-burner which is constructed on the Argand principle, and which is intended particularly for lamps on locomotives or other moving machines or devices.

The invention consists in the arrangement of a cage made of perforated sheet-metal surrounding the mouth of the supply-pipe in such a manner that the splashing of the oil or burning-fluid in the reservoir is not communicated to that in the burner, and the supply of oil in the burner remains uniform.

It consists, further, in the application of an inner cylinder made of perforated sheet-metal or wire-gauze, and supported by an inner false bottom, in combination with the outer draft-cylinder and with the burner in such a manner that by the combined action of the draft-cylinders and two bottoms the influence of sudden gusts of wind on the flame is broken and a steady flame is obtained.

It consists, finally, in the application of two or more rims in combination with the rod which supports the button or spreader, and with the inner draft-tube of the burner in such a manner that by said rims the spreader is held in the center, and at the same time said rims are not liable to get fast in the draft-tube and the spreader can readily be removed whenever it may be desirable.

A represents an Argand burner provided with an outer draft-tube, *a*, and a center draft, *b*. The annular space *c*, between these two tubes is occupied by the circular wick *d*. Oil or burning-fluid is supplied to the wick through the pipe *e*, which is surrounded by a double conical cage, *f*, made of perforated sheet-metal or wire-gauze, as clearly shown in Fig. 1, of the drawings. By the action of this cage the splashing of the oil or burning-fluid in the reservoir is prevented from producing any commotion in the circular space *c*, and the supply of oil to the wick is uniform so that a steady flame is obtained.

The outer draft-tube, *a*, is supported by a draft-cylinder, *f'*, made of perforated sheet-metal or wire-gauze and attached to the same by a bayonet-joint, or in any other convenient manner. Through the center of this cylinder rises the inner draft-cylinder, *g*, corresponding in diameter to the center draft, *c*. This inner cylinder is also made of perforated sheet-metal or wire-gauze and it is supported by the false perforated bottom *g'*, between which and the outer bottom an air-chamber is formed, so that by the combined action of the two cylinders and the two bottoms a uniform draft of air is effected and the perturbations of the flame by sudden gusts of wind are avoided.

The cap *h*, of the burner is made in such a shape that the flame will strike the reflector with its full effect and a brilliant light is produced.

The spreader or button *i* is supported by a rod, *j*, which passes through two or more rings, *k*. These rings fit nicely into the center draft, and they are supported by arms which obstruct the draft as little as possible. By said rings the spreader is held properly in the center, and it can always be removed whenever it may be desired, the rings not being liable to stick fast in the center draft, the same as a guide-tube, which has heretofore been used for the purpose of holding the spreader in position, and which is liable to stick so hard in the center draft that it can only be removed with the greatest difficulty.

A serious objection to the common mode of fitting the button-rod in small stationary sockets is the difficulty in finding them with the end of the rod. This is especially the case with the lower socket; which is necessarily fixed near the lower end of the tube; but by the use of two rings fixed by arms upon the rod and fitting the draft-tube, no difficulty occurs in inserting the said rings successively in the

upper end of the tube, which is clearly in view.

The mode heretofore adopted in making and applying peforated conical guards to regulate the flow of oil from the reservoir to the burner of lamps is inconvenient in respect to the space occupied by said guards, but by my mode of surrounding the mouth of the supply-pipe with two perforated cones, I provide an effective guard occupying but little space.

By these improvements a lamp-burner is obtained, which can be manufactured cheaply, which produces a steady and economical flame and which is not liable to get out order.

I claim as new and desire to secure by Letters Patent—

1. The described arrangement of the double conical foraminous cage or guard *f*, surrounding the mouth of the supply-tube *e*, in the described relation to the reservoir and burner, for the purposes specified.

2. The plurality of supporting-rings *k k*, attached by arms to the button-rod *j*, and disconnected from the draft-tube, when combined and arranged in relation to the various parts of the lamp-burner in the manner and for the purposes set forth.

PETER BUDENBACK.

Witnesses:

M. M. LIVINGSTON,

C. L. TOPLIFF.