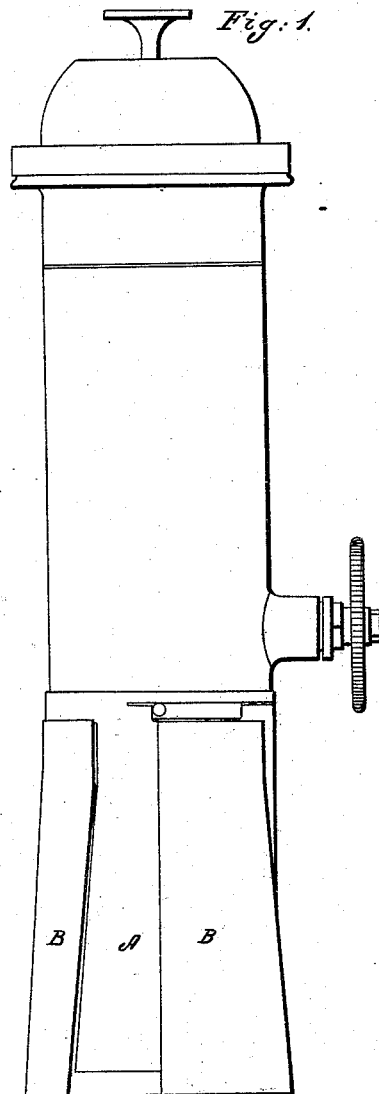
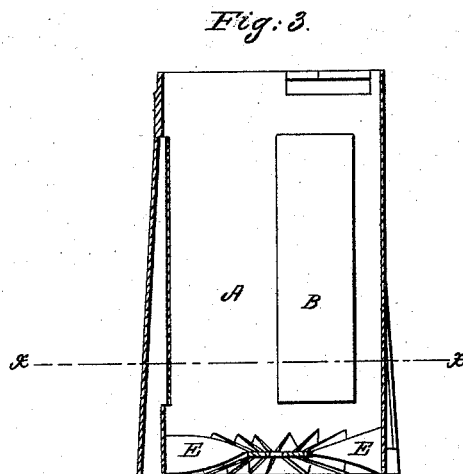
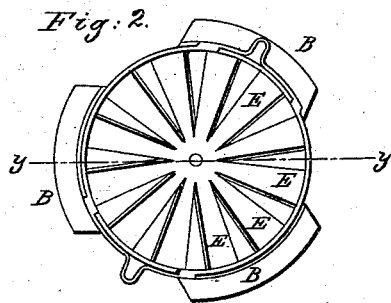
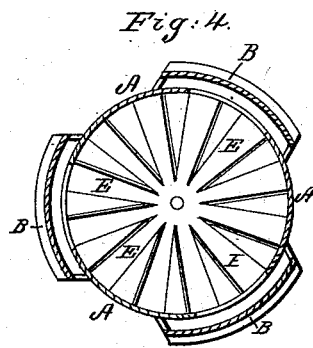


P. BUDENBACH.
Locomotive Head Light.

No. 54,850.

Patented May 22, 1866.



Witnesses:
W. F. Hall
C. A. Pettit

Inventor:
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Attorneys.

UNITED STATES PATENT OFFICE.

PETER BUDENBACH, OF NEW YORK, N. Y.

IMPROVEMENT IN HEAD-LIGHTS FOR ENGINES.

Specification forming part of Letters Patent No. **54,850**, dated May 22, 1866.

To all whom it may concern:

Be it known that I, PETER BUDENBACH, of the city, county, and State of New York, have made certain new and useful Improvements in Locomotive Head-Lights; and I do hereby declare the same to be a full, clear, and exact description of the nature, construction, and operation of the same, sufficient to enable one skilled in the art to which it appertains to construct and use the same, reference being had to the accompanying drawings, which are made part of this specification, and in which—

Figure 1 is an elevation. Fig. 2 is a horizontal section on the line *x x*, Fig. 3. Fig. 3 is a vertical section on the line *y y*, Fig. 2. Fig. 4 is a view of the lower end of the tube, showing the radial deflecting-plates.

Similar letters of reference indicate corresponding parts in the different figures.

The invention consists in the arrangement of deflecting-plates in the lower casing or tube of the lamp, by which the entering air is prevented from impinging directly upon the flame to disturb it.

In the drawings, A is the lower tube, which forms an air-chamber at the lower end of the lamp, and B are plates which cover the apertures C in the tube. The plates B are so much larger than the apertures C that the air is com-

pelled to make a tortuous track in entering, and meeting with other volumes of air which have entered under similar conditions, they form a body of air without and decided direction, which passes upward to the flame without producing agitation or disturbance.

At the lower end of the tube A are oblique radiating wings E, which give a spiral direction to the entering upward current, which combines with the air entering by the lateral apertures, and passes upward to supply the flame.

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

The combination of the plates B, covering and extending beyond the margin of the apertures C, with the radial and oblique director-plates in the lower opening of the tube of A, the combined devices operating to deflect the entering currents of air to prevent the direct infringement of the air upon the flame and the consequent disturbance thereof.

The above specification of my invention signed this 22d day of January, 1866.

PETER BUDENBACH.

Witnesses:

FERD. KASOHE,
JOHN A. WIEDERSHEIM.