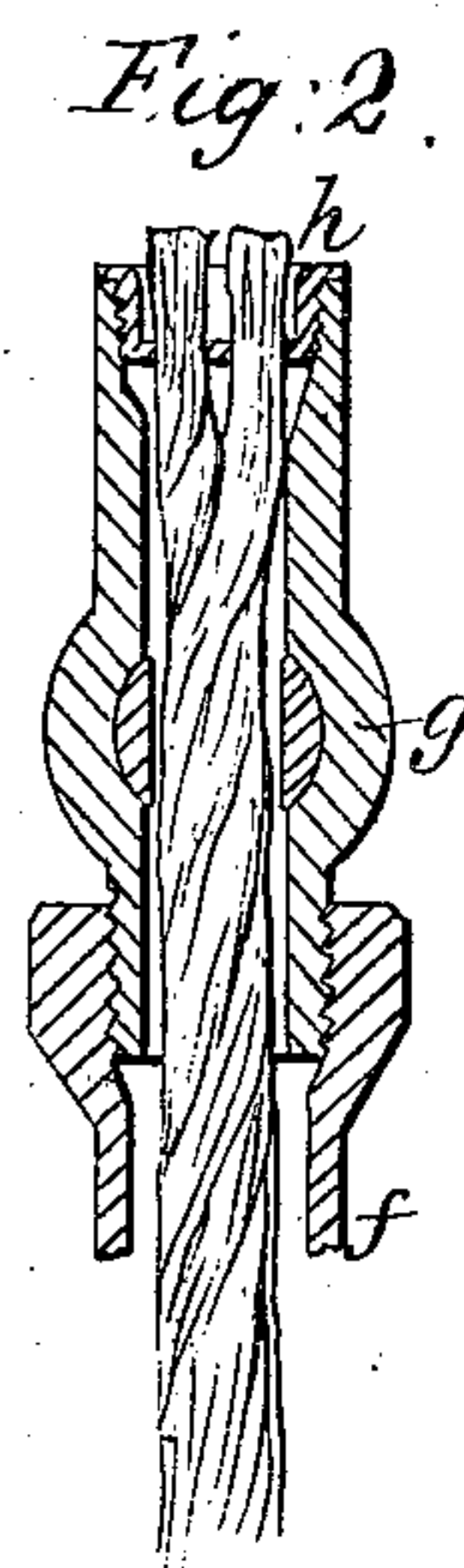
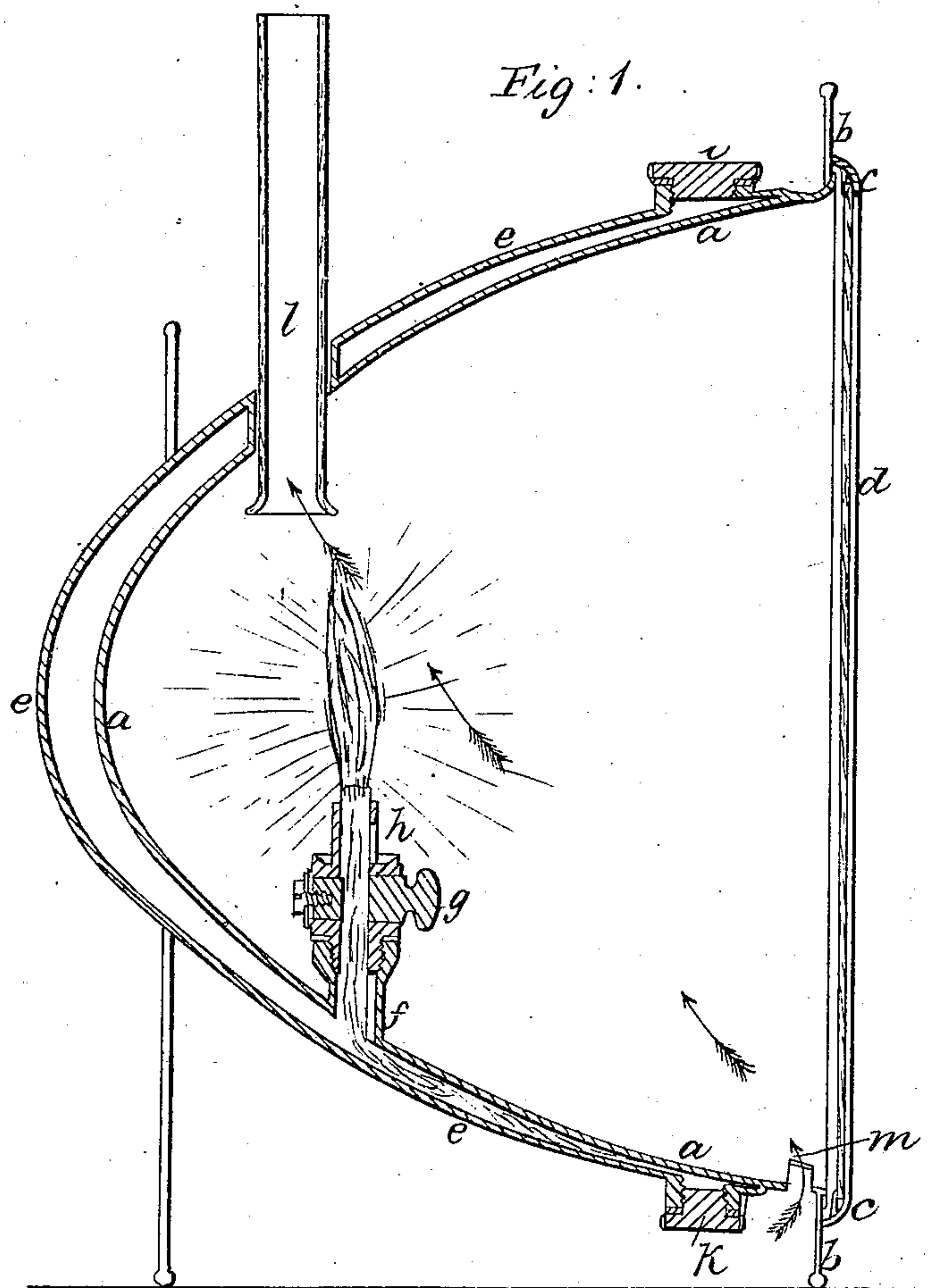


F. J. SEYMOUR.
Locomotive Head-Light.

No. 15,305.

Patented July 8, 1856.



Witnesses:

Samuel W. Serrell

Thomas G. Hardt

Inventor

Fredk J. Seymour

UNITED STATES PATENT OFFICE.

FREDERICK J. SEYMOUR, OF WATERBURY, CONNECTICUT.

LOCOMOTIVE REFLECTOR-LAMP.

Specification of Letters Patent No. 15,305, dated July 8, 1856.

To all whom it may concern:

Be it known that I, FREDERICK J. SEYMOUR, of Waterbury, in the county of New Haven and State of Connecticut, have invented, made, and applied to use certain new and useful Improvements in Locomotive Reflector-Lanterns; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawing, making part of this specification, wherein—

Figure 1, is a vertical section of my locomotive lantern and Fig. 2, is a section of the burner in larger size and at right angles to the section shown in Fig. 1.

Similar marks of reference indicate the same parts.

The nature of my invention consists in forming the reservoir containing the oil or other material to be burned around the reflector itself by using a double casing either partially or entirely surrounding said reflector, thereby the heat of said reflector is made use of to keep the oil or other material liquid and limpid; I also construct my burner in such a manner as to prevent any overflow from the reservoir, and at the same time allow all the contents of the reservoir below the burner to be drawn up by capillary attraction; and I arrange the air spaces or openings relatively with the flame so that all smoking is prevented and that without the use of a glass chimney, which chimney when used always obstructs the light more or less, as well as the operation of the reflector.

In the drawing *a*, is a parabolic or other reflector of any desired shape; *b* is the front plate of the lantern, *c* the ring and *d*, the glass as usual.

e, is a casing of a corresponding shape to the reflector *a*, and shown herein as completely surrounding the reflector *a*, or the same may only extend sufficiently high to contain the required amount of material to be burned, and *i*, is an air tight screw at which the said reservoir is filled and *h*, is a similar screw at the bottom of the reservoir at which the contents can be emptied or the same washed out.

f is a pipe through the reflector *a*, to the oil space and on this is attached a cock *g* above which is the burner *h*. This cock *g* has a large sized hole through its plug sufficient to pass the wick of the burner, which

passing down into the reservoir will act until the contents thereof are burned up; but when the reservoir is being filled the oil or other burning material would be apt to overflow the wick, hence said cock is provided, by turning of which sufficient compression can be obtained to prevent said overflow, or to regulate the amount supplied to the light while burning.

In cases where lard oil is used I find it preferable that the wick in the burner *h*, should be divided as shown in Fig. 2, and the wick passing freely through the cock and tube to the burner is thoroughly supplied with burning material except when the wick is compressed to regulate the same, by partially turning the cock.

In cases where the flame is directly under the escape pipe of any ordinary reflector the rush of air passing to said reflector is apt to cause smoke to form on the opposite side to that on which the wind or draft acts. I therefore admit air to my reflector near the front edge at *m*, and place the smoke pipe or chimney *l* to the rear of the vertical line above the burner, so that the rush of air through the reflector passing in nearly a straight line from one opening to the other as indicated by the arrows will take the top of the flame and carry it and any smoke or gases slightly backward and up the pipe or chimney *l*, effectually preventing smoke from being deposited in the reflector particularly near the center part.

I do not claim regulating the amount of fluid or burning material supplied to a wick and burner by means of a cock, as this has been done, but I am not aware that the wick itself has ever before been passed through the cock, and the flow of burning material regulated by the compression thereof on the wick, whereby the cock can be placed near the burner and the wick be allowed to extend below said cock to any desired point under circumstances that would prevent the use of a cock to regulate the supply to the wick, and this arrangement becomes indispensable with my reflector lantern, because it is required that all the oil from the reservoir may be burned up, and also that the wick be prevented from overflow in filling said reservoir.

What I claim and desire to secure by Letters Patent is—

1. Constructing the reservoir of locomotive lamps so that the reflector becomes one

side of said reservoir for the purpose of heating the contents thereof and rendering the same liquid and limpid substantially as specified.

5 2. I also claim constructing the reservoir of locomotive lanterns by means of a case surrounding the whole reflector and provided with the air tight screws *i, k*, so as to cause said reservoir to become a self supplying fountain to the burner tube *f*, as
10 specified.

3. I also claim regulating the supply of oil or other burning material to the flame of a lamp or shutting off said supply, by means

of compression on the wick by the cock *g*, 15 or its equivalent, as specified.

4. I also claim placing the chimney *l*, to the rear of the vertical line over the flame, when the draft is supplied at or near the front of the reflector in the manner and for 20 the purposes substantially as specified.

In witness whereof I have hereunto set my signature this tenth day of June 1856.

FREDK. I. SEYMOUR.

Witnesses:

LEMUEL W. SERRELL,
THOMAS G. HAROLD.