

(No Model.)

2 Sheets—Sheet 1

R. STEEL.  
SAFETY OIL LAMP.

No. 248,676.

Patented Oct. 25, 1881.

FIG. 1

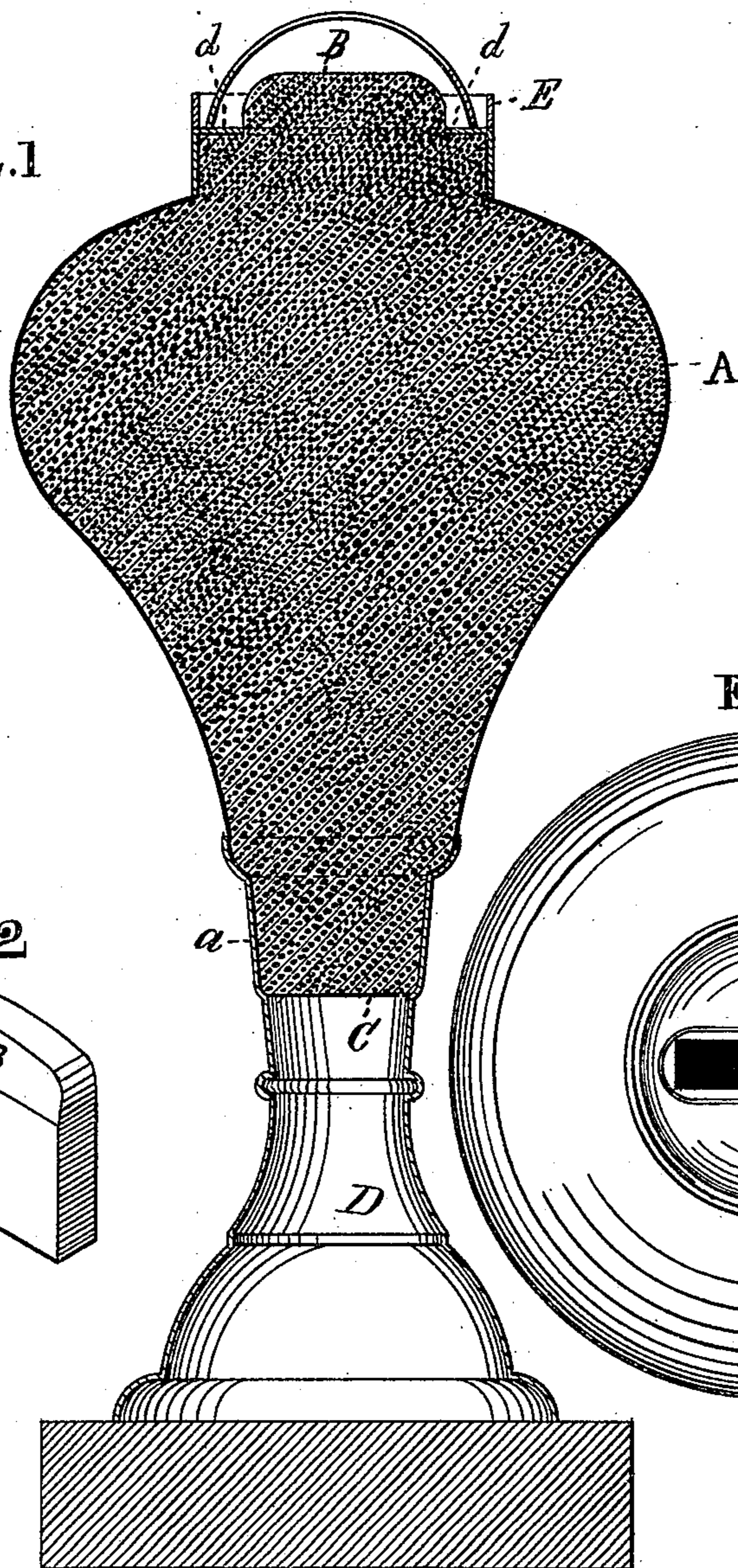


FIG. 2

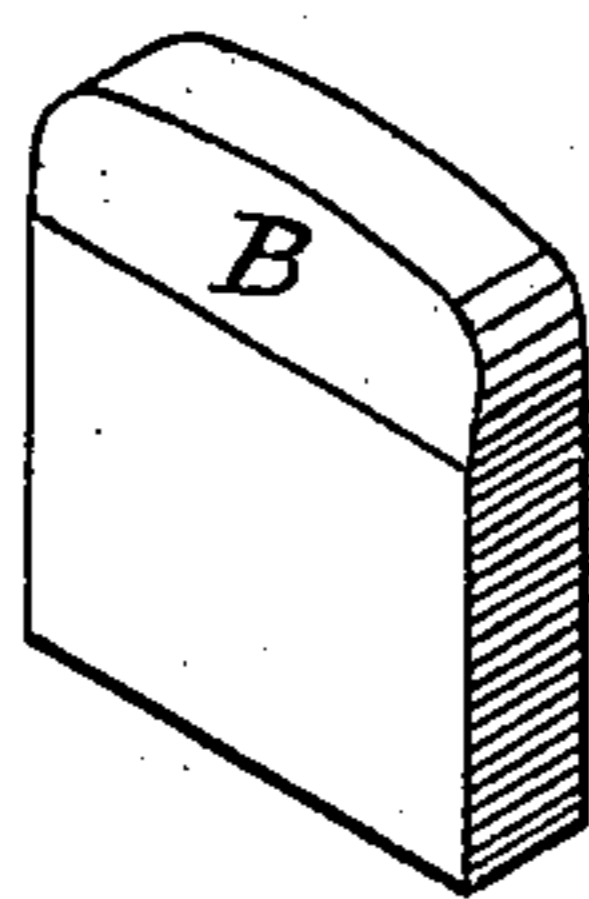
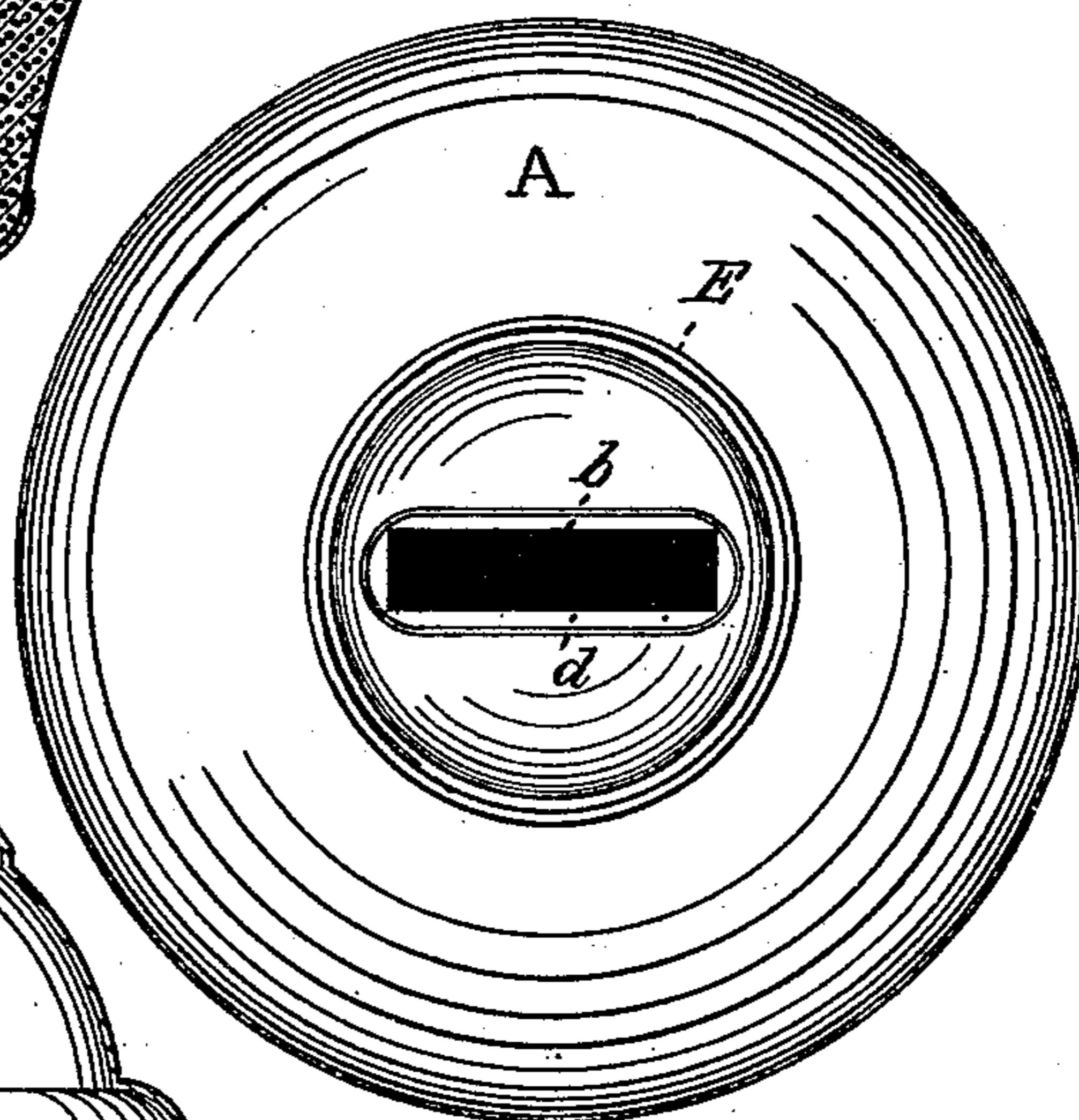


FIG. 3



Witnesses

Thomas J. Bewley.  
L. C. Loring, Examiner.

Inventor

Robert Steel.  
Stephen H. Stickney, atty.

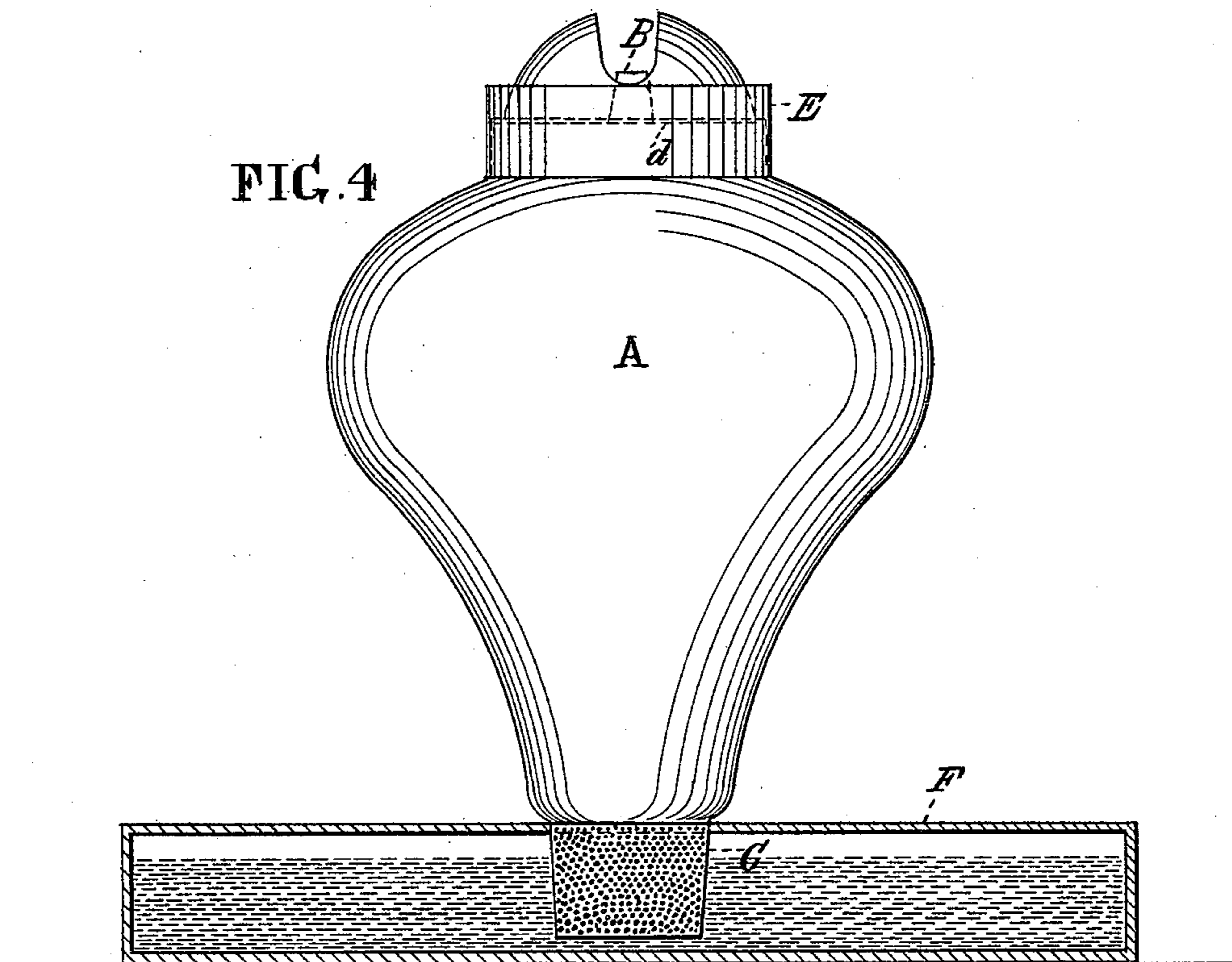
(No Model.)

2 Sheets—Sheet 2.

R. STEEL.  
SAFETY OIL LAMP.

No. 248,676.

Patented Oct. 25, 1881.



Witnesses.

Thomas J. Bewley.

John S. Kahoon

Inventor

Robert Steel.

per Stephen M. Stick attorney

# UNITED STATES PATENT OFFICE.

ROBERT STEEL, OF PHILADELPHIA, PENNSYLVANIA.

## SAFETY OIL-LAMP.

SPECIFICATION forming part of Letters Patent No. 248,676, dated October 25, 1881.

Application filed February 16, 1881. (No model.)

*To all whom it may concern:*

Be it known that I, ROBERT STEEL, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a new and useful Improvement in Safety Oil-Lamps, of which the following is a specification.

The object of my invention is the accomplishment of the great desideratum so long sought for of getting a lamp incapable of explosion, and by the use of which the liability to disastrous accidents is greatly diminished. This object is fully accomplished by my invention, which is as follows: I entirely dispense with a chamber in the lamp for holding the oil to be burned by substituting in place thereof a solid body made of porous natural or artificial stone, or other substance that will readily absorb illuminating-oil and admit a free passage thereof to the burner. I construct this lamp of any desirable form, having a teat, in connection with a suitable burner, in place of an ordinary wick, the teat forming part of the solid block or body of the lamp, or else made in an independent piece of the same material or any other suitable material for the purpose. The lower part of the lamp has a suitable projection for connecting it with the socket of a base or stand, like that of any ordinary lamp, and may be connected therewith by means of screw-threads or otherwise, as desired. This part is left in its porous state for the filling of the body of the lamp with the oil, as hereinafter described; but the rest of the surface, with the exception of the teat, I enamel or otherwise coat or cover, to prevent the waste of oil by exudation and evaporation and the soiling of the surface. If desired, an ordinary wick may take the place of the teat.

In the accompanying drawings, which make a part of this specification, Figure 1 is a vertical section of my improved lamp. Fig. 2 is a perspective view of the teat B, made in a separate piece from the body and adapted to be connected with it and the burner by means of a corresponding opening in the body and burner. Fig. 3 is a top view of the body A of the lamp, provided with a burner, E, there being an opening, *b*, through the burner, which extends vertically into the body A a suitable distance for the reception of the lower and

main portion of the tip B. Fig. 4 is a side elevation of the body A detached from the base D and connected with the filling-vessel F.

Like letters of reference in both figures indicate the same parts.

A represents the body of the lamp, which contains the oil to be burned. I construct it of porous natural or artificial stone, or other suitable porous substance or material that will readily absorb a sufficient quantity of oil and admit of its being drawn up in proper quantity to the burner by the action of the heat of the flame. It is provided with a teat, B, made in the same piece with the body A, or separate from it, and connected by means of a suitable vertical opening, *b*, in said body. Such a teat, B, is shown in Fig. 2, and the opening *b* is shown in Fig. 3, there being a corresponding opening in the horizontal plate *d* of the burner E, as represented in said figure.

I do not confine myself to the use of any particular kind of burner, as the burner forms no part of my invention. When made separate it may be either of the same material or any other suitable porous substance.

If desired, an ordinary wick may be used instead of the teat B, a suitable opening being made in the body A to receive it.

The body A, I connect with any suitable base or stand, having its lower part of suitable form to connect therewith, which part I connect previously with an oil receiver or reservoir for the purpose of charging the lamp with oil.

In the drawings, C represents a projection on the lower side of the body A, of suitable form to connect with the stand or base D, which has a socket, *a*, of corresponding form and dimensions.

F is a vessel which contains oil for filling the pores of the lamp, the body A being removed from the base D and connected with an opening in its top plate, which is of proper size to receive the projection C.

In order to prevent the exudation and evaporation of the oil from the lamp, I enamel or otherwise coat with suitable material all of the surface between the projection C and the plate *d* of the burner.

It will readily appear that my invention is adapted to oil-lamps of every description, and that a lamp so constructed, in which the oil is

contained in the pores of a solid body, is incapable of explosion, there being no chamber in which gases would accumulate, and that a lamp so constructed can very readily be kept  
5 perfectly clean, and if accidentally upset would not soil anything, as no oil could escape from it.

I claim as my invention—

1. A lamp having a porous body of natural or artificial stone or other equivalent porous material, for containing within its pores the oil to  
10 be burned, and having a wick or teat, B, in combination with a suitable burner, substantially as described.

2. A lamp having a body, A, of porous natural or artificial stone or other equivalent  
15 porous material, for absorbing and containing

within its pores the oil to be burned, and a projection, C, adapted to absorb and convey the oil from a reservoir or charging-vessel to the main part of said body, the said projection  
20 being combined with the base D, having a socket, a, substantially as set forth.

3. A lamp having a body, A, of porous material, substantially as described, being exteriorly enameled or otherwise coated to prevent  
25 exudation and evaporation of the oil from its surface, substantially as set forth.

ROBERT STEEL.

Witnesses:

THOMAS J. BEWLEY,  
STEPHEN USTICK.