

I. VAN BUNSCHOTEN.

Camphene Lamp.

No. 8,784.

Patented March 2, 1852.

Fig. 1.

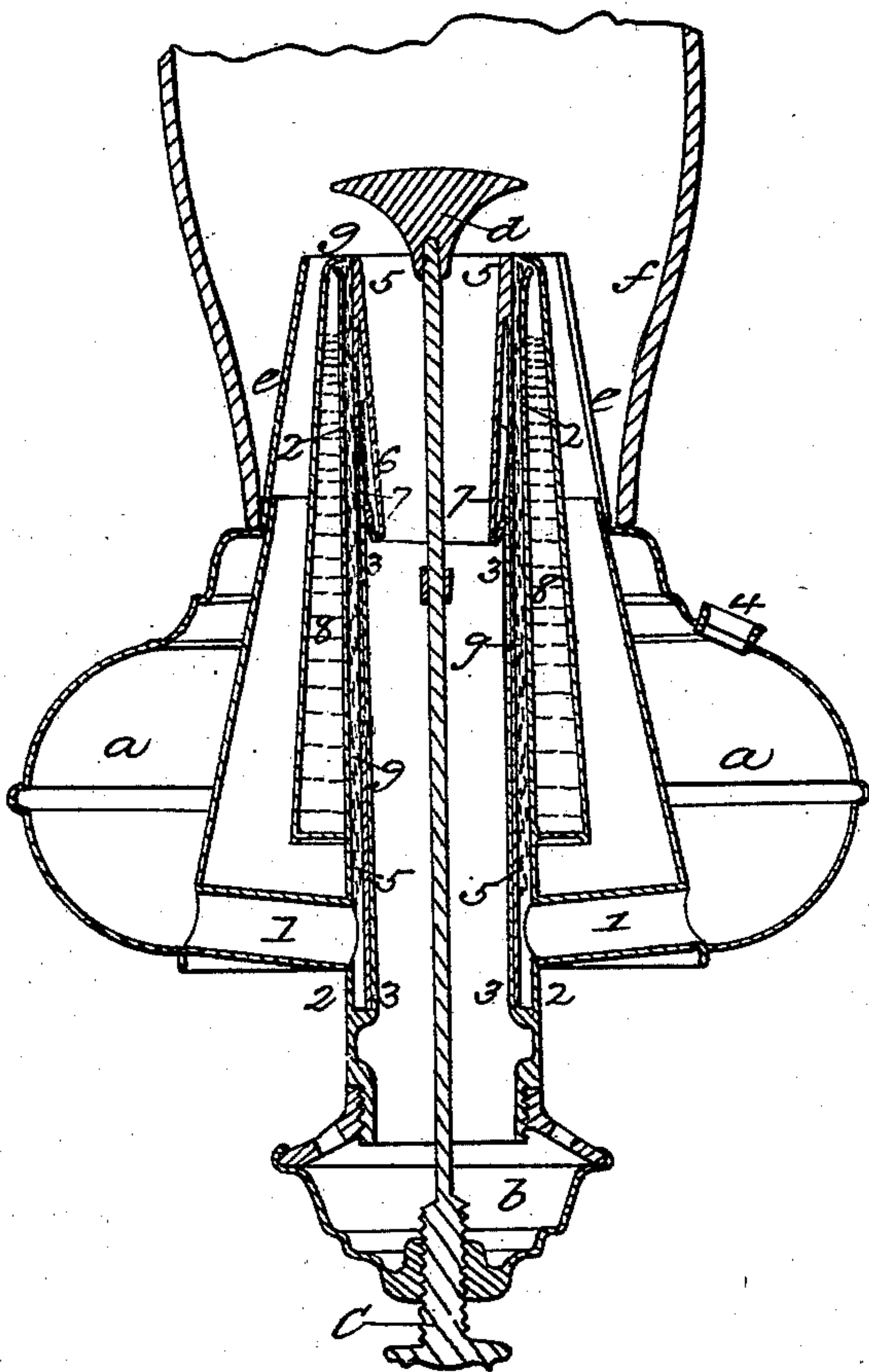
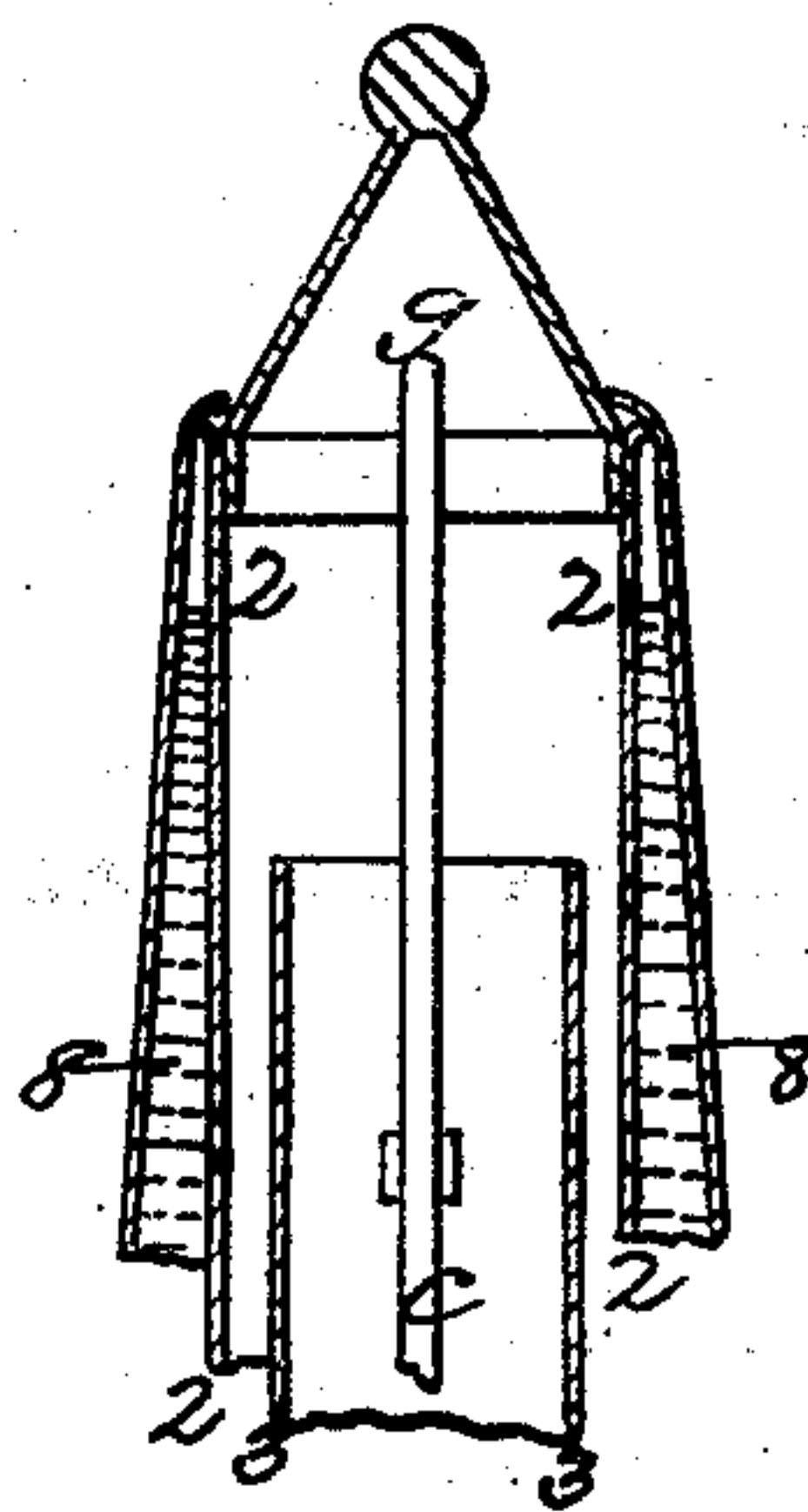


Fig. 2.



Witnesses:

W. Serrell

Samuel W. Serrell

Inventor:

Isaac van Bunschoten.

UNITED STATES PATENT OFFICE.

ISAAC VAN BUNSCHOTEN, OF NEW YORK, N. Y.

CAMPHENE-LAMP.

Specification of Letters Patent No. 8,784, dated March 2, 1852.

To all whom it may concern:

Be it known that I, ISAAC VAN BUNSCHOTEN, of the city, county, and State of New York, lamp-manufacturer, have invented, made, and applied to use certain new and useful Improvements in the Construction of Camphene-Lamps for the Purposes of Preventing the Camphene from Spilling Out and Exploding and also Extinguishing the Light by Water in Case the Lamp is Upset; and I 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 improved lamp. Fig. 2 is a section of the upper end of the burner, showing the means I use to fill the extinguishing water chamber.

The like marks of reference denote the same parts.

a, is a reservoir, of any convenient character, supplying by pipes; 1, the wick receiver, which is formed by an outside cylinder 2, and an inside cylinder 3; *b*, is the drip cup, with screw *c*, and rod to the button *d*; 4, is the supply hole to the reservoir; *e*, is the cone, and *f*, the glass: these parts, so far, are all made as usual. 5, is the wick tube receiving the wick *g*. In this form, so far as described, explosions often occur, from the reservoir being filled, while the lamp is burning, which causes a puff of vapor, or liquid, to ascend between the air tube, 3, and wick tube 5, which often catches light drawing the flame down the air tube, and heating the cylinder 3, so as to cause the fluid to boil over, and the flame is made worse; and if the lamp is moved carelessly, or tipped while in use, the liquid sometimes shakes over this tube, and catches fire. My improvement is intended to prevent these accidents, by making a tight joint, between the air tube 3, and the wick tube 5, to effect this, I attach a tube 6, within the tube 5, at its upper end, extending downward, and made small enough, at its lower end, to enter within the air tube 3, this tube 6, is fitted, before being attached in place, to the wick tube 5, with a leather packing 7, secured by turning the end of the tube 6, over, onto its lower edge;

this packing, as the wick tube is pushed down, takes the air tube 3, as shown, forming a tight joint, which effectually obviates the dangers heretofore mentioned. It will be seen, that this packing may be around the outside of the upper end of the air tube 3, to take the wick tube 5, or attached on the inside of the wick tube itself, or may be around the inside of the air tube, at its upper end, to take the tube 6, although I prefer that shown. These means effectually prevent the escape of the fluid, under all ordinary circumstances, as the wick will effectually prevent the escape of camphene, through itself, to any amount to cause an explosion; and the next part of my invention consists of means to put out the flame, in case the lamp is upset, or accidentally tipped, so as to cause danger of explosion. To effect this object, I surround the outside tube 2, with a water chamber 8, that is formed of a size to contain sufficient water. The upper end of this chamber is formed as shown, with the upper edge, or lip, turned inward, and the top of the tube 2, is turned slightly outward, or may have a strip of metal placed around it, rising slightly higher than the top of the tube 2, so as to allow a little space, between the top edge of the tube 2, and the wick *g*, to prevent the liquid, as it rises on the wick, running over into the chamber 8; this chamber 8, is to be filled with water, by placing a small conical shaped stopper 9, into the tube 2, so as to close it, as shown in Fig. 2, and pouring water onto the cone 9, which causes it to pass into the chamber 8.

The operation of this lamp, when properly trimmed, is, that if the lamp is thrown down, or falls by any accident, the water is instantaneously thrown out onto the wick, by a jet all around, which immediately extinguishes the light, and my means of preventing the escape of the camphene into the tube 3, acts in concert with the water chamber by retaining the camphene, in case of accident, while all flame is put out, by the very act of upsetting or jarring the lamp.

The water chamber 8, may be made as a jacket, stopping a little short of the top of the wick tube 2, so as to allow it to be filled with water, without the conical stopper 9, and a sleeve, fitted to slide on, with

its upper end formed as shown, to direct the water onto the flame; and the top of the water chamber 8, may be made straight, although not so good, as when formed with
5 a lip, as shown, to direct the water to the flame. It will be seen, that this water chamber does not want replenishing often, as there is only the evaporation from a small surface, to take the water off; but this, of
10 course, must be kept sufficiently filled for the purpose, and the reservoir may be placed in any other position on the lamp and connected with the ring.

I am aware, that a lamp has been made,
15 with a flanch, or short pipe, inside the wick tube 5, to enter inside the air tube 3, to prevent the resinous matter, formed in burning, sticking the wick and air tube together; but I am not aware of packing ever having
20 been employed at this point; therefore

What I desire to secure by Letters Patent is—

1. I claim the application of a suitable elastic packing, between the wick tube 5, and air tube 3, attached in any convenient man- 25
ner, in camphene lamps, for the purposes, and as described and shown.

2. I claim the application of a suitable ring, or chamber, around the wick tube, to receive or conduct water, or other fluid, to 30
the wick so that the light is extinguished in case of accident, as described and shown.

In witness whereof, I have hereunto set my signature, this tenth day of November, one thousand eight hundred and fifty-one. 35

ISAAC VAN BUNSCHOTEN.

Witnesses:

W. SERRELL,
LEMUEL W. SERRELL.