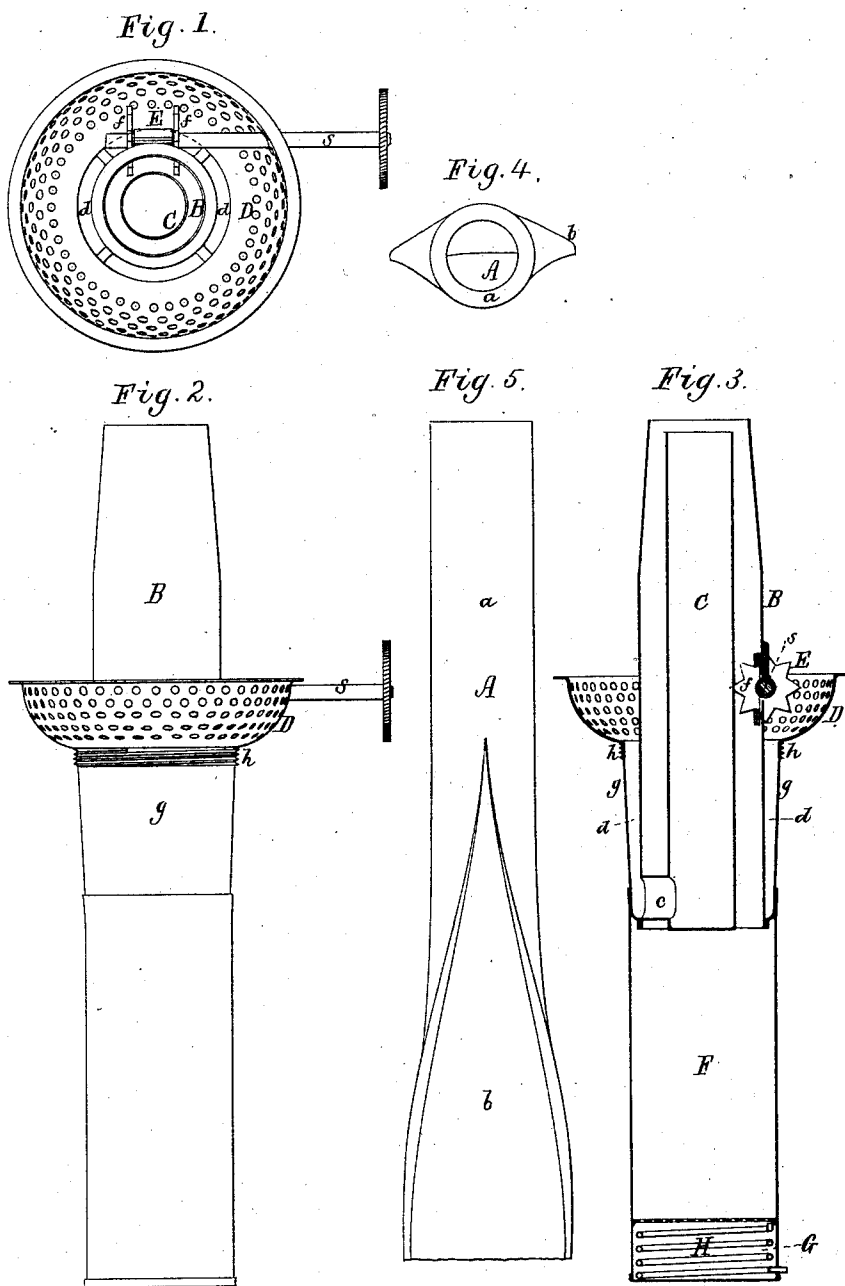


(No Model.)

S. G. DODD.
ARGAND BURNER.

No. 367,606.

Patented Aug. 2, 1887.



Witnesses.
S. N. Piper,
Th. W. Torrey,

Inventor.
Stephen G. Dodd,
by R. H. Eddy atty.

UNITED STATES PATENT OFFICE.

STEPHEN GROVER DODD, OF FORT ASSINABOINE, MONTANA TERRITORY.

ARGAND BURNER.

SPECIFICATION forming part of Letters Patent No. 367,606, dated August 2, 1887.

Application filed August 30, 1886. Serial No. 212,151. (No model.)

To all whom it may concern:

Be it known that I, STEPHEN GROVER DODD, of Fort Assinaboine, in the county of Choteau, of the Territory of Montana, have invented a new and useful Improvement in Safety Argand Burners for Lamps; and I do hereby declare the same to be described in the following specification, and represented in the accompanying drawings, of which—

Figure 1 is a top view, Fig. 2 a front elevation, and Fig. 3 a vertical and transverse section, of a burner provided with my invention, the nature of which is defined in the claim hereinafter presented. Fig. 4 is a top view, and Fig. 5 a side view, of the wick used in such burner.

In such drawings, A denotes the wick, which is woven tubular for a portion of its length from one end of it, and from thence it is open through one side of it to its other end—that is, the part *a* is tubular, and the part *b* below the portion *a* is slit downward or open, like a flat wick, its width corresponding, or about so, to the length of the circumference of the upper portion. The outer tube of the burner is shown at B and the inner one at C, the two being concentric and the inner one being closed at its lower end and there provided with an air duct or tube, *c*, to extend from it horizontally to and to open into an annular space or chamber, *d*, surrounding the lower part of the tube B, such space or chamber being closed at its bottom and open at top, and formed within a tube, *g*, which at top is united to a cup, D, and at bottom to the tube B, the whole being to enable air to pass from the chamber *d*, through the duct *c*, into the bore of the tube C, and thence upward within such tube to the wick.

The air-chamber *d* opens at top into the cup D, that surrounds the outer wick-tube concentrically and is perforated on its sides. The stem *s* of the wick-elevator E extends horizontally into and out of the cup, the toothed disks *ff* of such elevator projecting into the wick through openings in the side of the tube B. The cup D at its junction with the tube *g* is screw-threaded, as shown at *h*, to admit of it being screwed into the cap of the neck of the oil-reservoir of a lamp.

Extending from and below the tube B is a cylindrical chamber, F, which has a forami-

nous bottom and has beneath it a shallow auxiliary chamber, G, within which is a spirally-coiled tube, H, of small bore. The tube H at its upper end opens into the chamber G, while at its lower end it opens through the side of the said chamber. The said chamber F is to receive the lower or flat portion of the wick and insulate it from the oil-reservoir, from which oil can only pass into the chamber F through the spiral tube and thence through the foraminous bottom of said chamber. The part in which are the chambers F and G, I make of zinc or some material which is a poor heat-conductor, in order to prevent as much as possible heating of the kerosene or liquid hydrocarbon or oil used in the oil-reservoir of the lamp. In this burner the wick has to be introduced lower end foremost into the top of the wick-receiving space between the wick-tubes B and C, after which it is to be pressed down therein until it may meet the elevator, which next can be used for further depressing the wick through such space and into the safety-chamber F, the wick in passing down by the air-duct *c* being caused to straddle such duct.

The coiled tube prevents the transmission of flame down the wick to the gas in the oil-reservoir of the lamp by a barrier of oil remaining in the tube under all circumstances, whichever way the lamp may be tilted in handling, or by it overturning on a table or floor. The foraminous bottom of the wick-chamber stops the downward movement of the wick, and not only allows the oil to flow to it, but prevents any flame from passing through it, (the said partition.)

I claim—

The combination of the safety-chamber G and the spirally-coiled tube H, arranged therein and opening out thereof, with the Argand burner, essentially as specified, consisting of the tube C, closed at its lower end and open at its upper end, the tube B, encompassing the tube C, the air-chamber *d*, the tube *c*, the supporting-cup D, and the wick-elevator E, all arranged essentially and to operate as set forth.

STEPHEN GROVER DODD.

Witnesses:

ELIZA S. DODD,
JNO. J. ADAMS.