W. H. ZIMMERMAN.

Lamp-Extinguisher.

No. 160,988. Patented March 16, 1875.

Fig. 1.

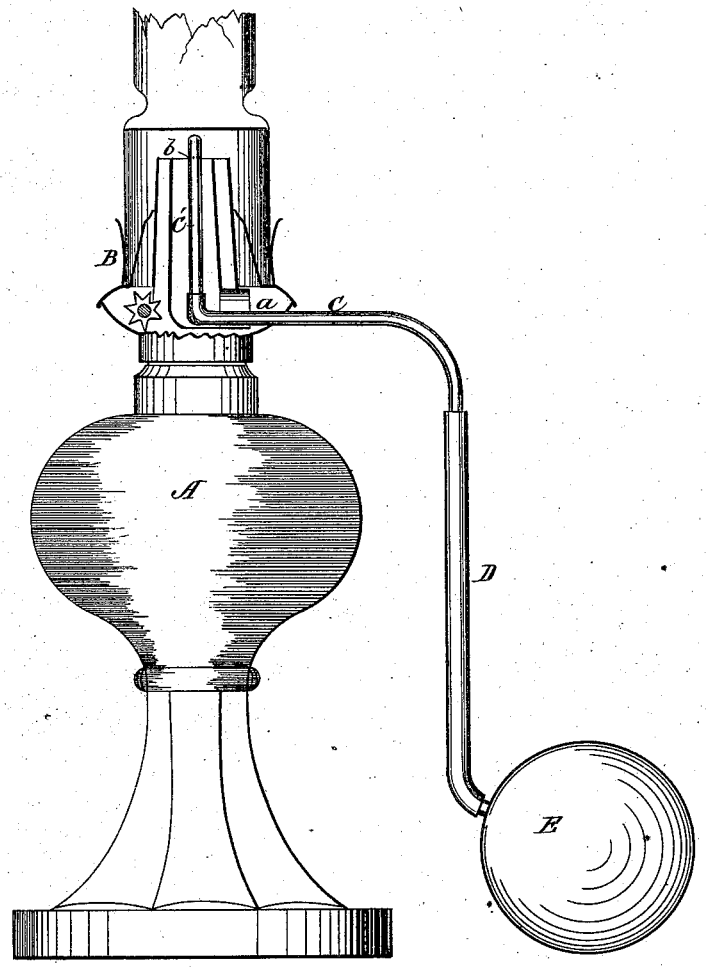

Fig. 2.

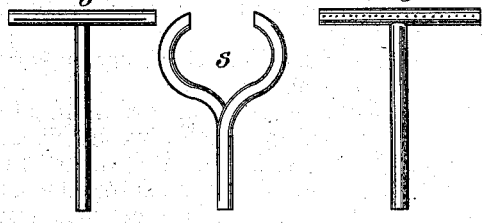

Fig. 3.

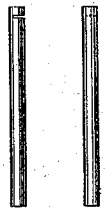

Fig. 4.

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WILLIAM H. ZIMMERMAN, OF CHESTERTOWN, MARYLAND.

IMPROVEMENT IN LAMP-EXTINGUISHERS.

Specification forming part of Letters Patent No. **160,988**, dated March 16, 1875; application filed February 16, 1875.

To all whom it may concern:

Be it known that I, Prof. WM. H. ZIMMERMAN, of Washington College, Chestertown, in the county of Kent and State of Maryland, have invented a new and Improved Lamp-Extinguisher; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing forming a part of this specification, in which—

Figure 1 is a side elevation, with burner in section; Fig. 2, modification of the flame-extinguishing tubes for flat burners; Figs. 3 and 4, modifications of the same for circular burners.

The object of this invention is to provide a means for extinguishing lamps in which the danger resulting from blowing down the chimney shall be avoided, and which shall in every way be more convenient and effective. It consists in the combination, with the burner of a lamp, of an elastic compressible air-chamber, and a tube for conducting the current of air from the same to the wick in such a manner as to blow out the flame without danger.

In the drawing, A represents a lamp having an ordinary Argand or circular burner, B. C is a metallic tube soldered to the burner at *a*. Said tube is extended outside the burner to form a connection for an elastic tube, D, and is connected inside the burner with a detachable quencher-tube, C′, which terminates at its upper extremity, just above the burner, in a closed end having a circumferential row of small perforations, *b*, upon a level with the wick. These said perforations form vents, which direct a series of radial blasts of air upon the burner for the purpose of extinguishing the flame, the vents being so arranged as to blow the flame directly away from the wick, and thereby avoiding the danger consequent upon blowing the flame downwardly.

I do not confine myself to the tube as thus described, for it is obvious that for different-shaped burners differently-shaped tubes are necessary. I may, therefore, use a tube with an open end, having above the opening a cap or disk for making a continuous radial blast, as shown in Fig. 4; or I may use for flat burners any of the modifications shown in Fig. 2, in which S is a branched tube; S′, a T-shaped tube with a slit in the cross-piece, and S″ a T-shaped tube with a row of perforations in the cross-piece.

By making the tube as shown in Fig. 4 the cap or disk may be so arranged upon supports within the tube as to be adjustable to regulate the nature of the blast. For the sake of classification, I call all these tubes "quenchers."

E is a hollow rubber ball attached to the elastic tube D, and forming an elastic air-chamber, which, when compressed, forces a current of air up the burner and upon the wick, in the manner described, the elasticity of the ball being sufficient, when liberated, to cause it to resume its original shape.

By means of the above-described arrangement any lamp may be provided with means of extinguishment which are at once simple, safe, and convenient, the device being admirably adapted to high swinging lamps, out of convenient reach, in which case the tube may be extended so as to bring the air-chamber within a convenient distance.

In the application of my invention I do not confine myself to the rubber ball, as shown, but may use any elastic compressible air-chamber.

Having thus described my invention, what I claim as new is—

1. The combination, with a lamp burner, of an elastic compressible air-chamber and a tube for conducting a current of air to the wick for the purpose of extinguishing the lamp, substantially as and for the purpose described.

2. The combination, with the burner B, of a tube, C, soldered to the same, and a detachable tube, C′, having a circumferential row of perforations, *b*, substantially as and for the purpose described.

PROF. WM. H. ZIMMERMAN.

Witnesses:

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WM. EMORY.