

United States Patent Office.

CHARLES HART, OF WAKEFIELD, MASSACHUSETTS.

Letters Patent No. 100,289, dated March 1, 1870.

LANTERN.

The Schedule referred to in these Letters Patent and making part of the same

To all persons to whom these presents may come:

Be it known that I, CHARLES HART, of Wakefield, of the county of Middlesex, and State of Massachusetts, have made a new and useful invention having reference to Lanterns; and do hereby declare the same to be fully described in the following specification and represented in the accompanying drawings, of which—

Figure 1 is a front elevation, and

Figures 2 and 3, vertical sections of a lantern as made in accordance with my invention.

In such drawings A denotes a kerosene lamp, having a cylindro-conical glass chimney, B.

The said chimney at its base is supported in a foraminous concavo-convex rest, *a*, and encompasses an air deflector, *b*, having a helical spring, *c*, extended around its periphery.

The wick-tube is shown at *c'*, and the shaft of the wick-elevator at *d*, it having a head or button, *e*, on its outer end.

The lamp, provided with such a burner and chimney, is in all respects substantially well known, and is in common use, the chimney being cylindrical for about three-fourths of its altitude, its upper part being tapered or frusto-conical, as represented.

The upper part or base of the top of the fluid-receiver *g* of the lamp I form with a lip or projection, *h*, to go entirely around the receiver, and extend from it in manner as shown in figs. 2 and 3.

A guard-frame, C, composed of two rings, *i k*, of sheet metal by a series of wires, *l l l*, the whole being as represented, encompasses the glass chimney.

The lower ring *i* is split through one side, as shown at *m*, and at its lower part it is formed with a channel, *k*, to close upon the lip *h*.

Figure 4 denotes a front view of the guard-frame C as separate from the lamp.

When the guard-frame is on the lamp it is held in place by a ring, *m'*, which encompasses the lower part of the frame, and is pushed down upon the frame. By raising the ring, the base part of the frame may be sprung off the lip *h*. The milled head of the wick-elevator comes outside of the guard when the latter is in place in the lamp.

There is applied to the guard-frame a chimney-cap or bonnet, D, it being supported by a cross-bar, *n*, so as to turn freely thereon.

The cross-bar clasps and slides freely on two uprights, *o o*, extended upward from the guard-frame, the said uprights having a band, handle, or bale, E, pivoted to their upper ends.

The chimney-cap or bonnet, formed as a box, has an opening, *p*, through its bottom to receive the upper end of the glass chimney.

Within the cap is a series of horizontal partitions, *g n s t*, composed of sheets of mica, or other suitable substance.

Each of the said partitions has a smoke passage made through it at or near one end of it. These smoke passages are arranged so that the smoke from

the lamp, while passing between the several partitions, shall have a zigzag course through the box, and finally escape out of a hole, *u*, made through one end of it.

The guard-frame is to protect the chimney from being easily broken, and the cap or bonnet is to protect from the smoke and heat, when escaping from the chimney, the hand of a person when hold of the handle.

The cap or bonnet also protects the chimney and flame of the wick from sudden draughts, tending to produce flickering or unsteadiness of the flame.

Furthermore, it will be seen that between the lower part or split base ring of the guard-frame and the chimney-rest is an open space, *u'*, into and through which the air for supply of the flame enters, it being led through a vertical foraminous ring or partition, *v*, extending from and around the top of the lamp to the circumference of the chimney-rest.

This ring is made with a notch, *w*, in it to enable it to receive the wick-elevator shaft, and to be raised off the lamp-reservoir with the chimney-rest.

By having the chimney-cap adjustable vertically it may be raised off the chimney or readily fitted to one. So by having the cap suspended on the cross-bar, and so as to be capable of being turned or tipped thereon, it will better accommodate itself to a chimney.

The guard and the cap serve to convert the kerosene-lamp into a lantern, and thus save the necessity of a glass globe or frame to encompass the chimney.

I make no claim to the kerosene-lamp or its chimney constructed as described.

What I claim as of my invention is as follows:

The guard-frame C, as composed of the series of wires *l l l*, the entire ring *k*, the split ring *i*, (formed with a clasping-groove, *n'*, as set forth,) and the contracting ring *m'*, the said frame being surmounted by the partitioned cap D, and for application to the lamp in manner as set forth.

Also, the chimney-cap D, as so applied to the guard-frame C as to be adjustable vertically or capable of being raised and disposed relatively to such frame and the chimney, as explained.

Also, the guard-frame C, as made with its lower annulus, *i*, open at one side, and formed with the channel *k* to fit on the lip *h* of the oil-reservoir *g*, and provided with a closing ring, *m'*, as specified.

Also, the arrangement of the lower annulus *i* of the guard-frame C, with an open space, *u'*, between it and the chimney or its rest, the same being so that the air for supply of the burner may pass into and through such space, and thence underneath and through the chimney-rest, as described.

Also, the combination and arrangement of the foraminous partition *v* with the chimney-rest and passage *w'*, as described, for the conveyance of air to the said chimney-rest.

Witnesses:

R. H. EDDY,
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CHARLES HART.