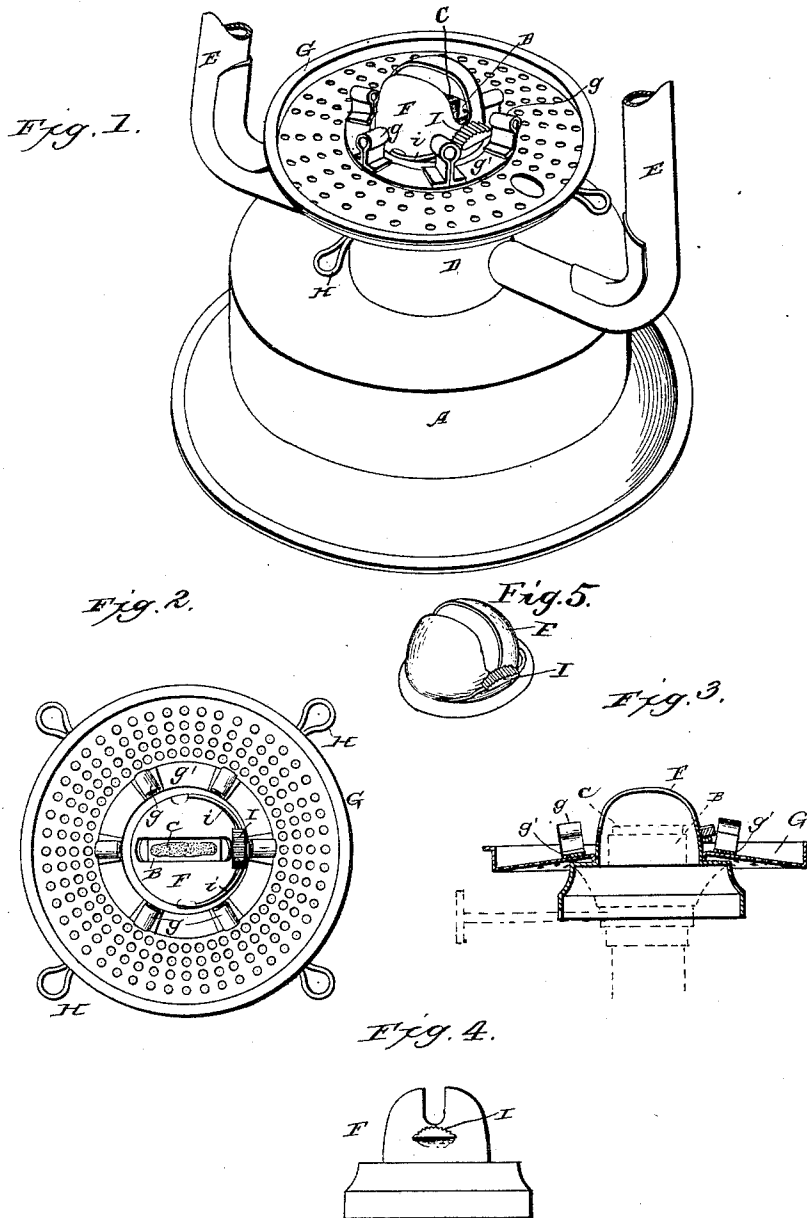


(No Model.)

L. A. ROBERTS.
IGNITING DEVICE FOR LANTERNS OR LAMPS.

No. 461,048.

Patented Oct. 13, 1891.



Witnesses
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UNITED STATES PATENT OFFICE.

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IGNITING DEVICE FOR LANTERNS OR LAMPS.

SPECIFICATION forming part of Letters Patent No. 461,048, dated October 13, 1891.

Application filed January 7, 1891. Serial No. 377,007. (No model.)

To all whom it may concern:

Be it known that I, LEWIS A. ROBERTS, of Carbondale, in the county of Lackawanna and State of Pennsylvania, have invented certain new and useful Improvements in Igniting Devices for Lanterns or Lamps; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, and to the letters of reference marked thereon.

This invention relates to that class of devices in which an ignitor (match) or series of ignitors mounted on a suitable carrier are brought in succession into proximity with the wick of a lantern or lamp and automatically ignited at the proper moment, thereby lighting the lantern or lamp, said parts being all inclosed within the globe or lantern-casing, and therefore not subjected to the action of side winds or external influences, such an arrangement being shown, for instance, in my patent, No. 414,889, dated November 12, 1889.

The invention consists, broadly stated, in a carrier for the ignitors, rotating in a horizontal plane, and a horizontal friction-surface located in proximity to the igniting-point of the wick and movable vertically with relation to the carrier, whereby the proper degree of friction may be secured between the ignitors and friction-surface without danger of breaking the ignitors, and, finally, it consists in certain novel details of construction and combinations and arrangements of parts to be hereinafter described, and pointed out in the claims at the end of this specification.

In the accompanying drawings, Figure 1 is a perspective view of the bottom portion of a tubular lantern having my invention applied thereto. Fig. 2 is a top plan view. Fig. 3 is a vertical section. Fig. 4 shows a modified form of friction-surface. Fig. 5 is a detail perspective view of the burner-cone, showing the friction-surface and spring-supporting arms.

Like letters of reference in the different figures denote the same parts.

I have deemed it expedient in the present instance to show the igniting mechanism as applied to a tubular lantern of the popular cheap type; but it will be understood that it

may be applied to any lantern or lamp of ordinary construction.

Referring to the drawings, A indicates the oil-reservoir or base of the lantern; B, the wick-tube; C, the wick; and D the chamber beneath the burner, with which the tube E communicates to supply warm air for combustion.

Fitting over and seated on the chamber D is the usual burner-cone F, having a notch in its lower edge for the passage of the shaft of the wick-raising wheel and a platform or enlargement slightly below the slot, upon which the gallery G for the globe seats. This gallery G is capable of being rotated on the cone and constitutes the carrier for the ignitors. The holders or carriers proper *g* consist simply of small tubular pieces, preferably formed integral on a ring *g'*, being mounted thereon around the central opening, through which the cone projects. Handles or projections H may be provided on or attached to the gallery for convenience in rotating the same.

On the side of the cone, at one end of the slot and in position to co-operate with the ends of the ignitors projecting inward from the carrier, is the friction surface or piece I. Thus it will be seen that when the gallery and carriers are rotated the ignitors are brought successively into contact with the friction-surface and ignited at a point in proximity to the wick, thereby lighting the same without danger of having the ignitors extinguished by external influences.

The friction-surface and carrier, it will be seen, are both arranged in a horizontal plane, and in order to secure the best results it is desirable that they should be movable vertically with relation to each other, in order that an even pressure may be exerted on the ignitors in passing over the friction-surface, and, further, that the friction-surface should be inclined slightly, so that the ignitors will travel up the same until the pressure increases sufficiently to set them off at the proper point. In the preferred construction, and as shown, the carrier is designed to remain at the same level and the friction-surface I is mounted on spring-arms *i*, secured by solder or otherwise to the sides of the cone, the said surface being inclined in both directions in order to set

off the ignitors when moving in either direction.

By arranging the carriers proper *g* in a circle around the burner-cone it will be seen at a glance that the construction of the device is exceedingly simple, requiring no change in the lamps or lanterns of ordinary construction, and when out of contact with the friction-surface the ignitors are removed far enough from the heated metal or wick to prevent their accidental ignition therefrom.

If desired, the friction-surface may be secured directly to the cone, as shown in Fig. 4, and the gallery be permitted to move vertically a very slight distance as the ignitors ride up said surface, as will be readily understood.

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

1. In an igniting device for lamps, the combination, with the wick tube or opening, of the horizontally-arranged and vertically-movable friction-surface and the horizontally-rotatable ignitor-carrier, substantially as described.

2. In an igniting device for lamps, the combination, with the friction-surface mounted on spring-arms, of a horizontally-rotatable carrier, substantially as described.

3. In an igniting device for lamps, the combination, with the burner-cone having the wick-opening therein and the friction-surface

secured thereon, of the globe-gallery mounted on said cone and the ignitor-carrier thereon, substantially as described.

4. In an igniting device for lamps, the combination, with the removable cone having the central slot or opening for the wick, the enlargement or bearing below the same, and the friction-surface at one end of the wick-opening, of the globe-gallery mounted on said bearing and the carriers thereon, substantially as described.

5. In an igniting device for lamps, the combination, with the burner-cone and friction-surface, of the ignitor-carriers mounted on and revolving around said cone, substantially as described.

6. In an igniting device for lamps, the combination, with the burner-cone having the central wick-opening, with the enlargement or bearing below the same, and the friction-surface mounted on spring-arms secured to the sides of the cone, of the globe-gallery mounted on said enlargement or bearing, the handles or projections on said gallery, and the ignitor-carriers mounted on said gallery around the central opening for the cone, substantially as described.

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Witnesses:

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