

(No Model.)

J. H. LEHMAN.

AUTOMATIC LIGHTING DEVICE FOR BICYCLE OR OTHER LAMPS.

No. 551,084.

Patented Dec. 10, 1895.

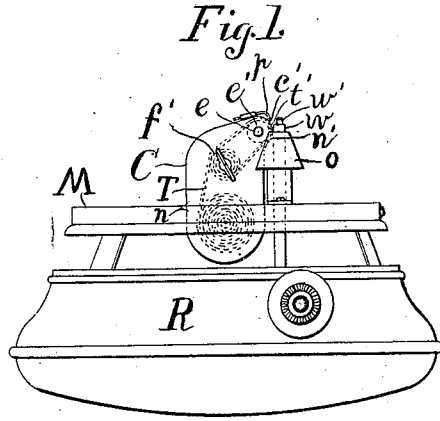


Fig. 3.

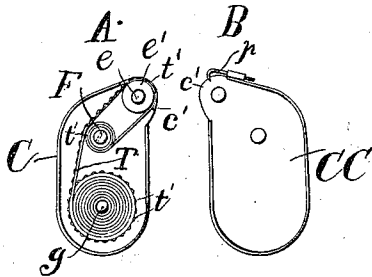


Fig. 4.

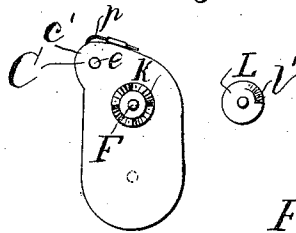


Fig. 5.

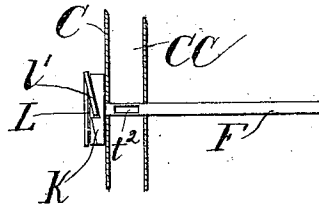
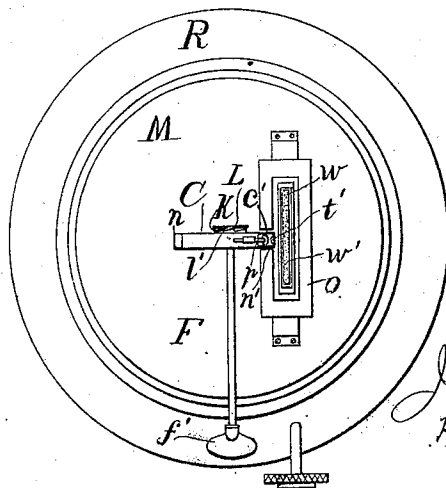


Fig. 2.



Witnesses:

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Inventor.

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UNITED STATES PATENT OFFICE.

JOSEPH H. LEHMAN, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR OF
ONE-HALF TO HARRIE B. HART, OF SAME PLACE.

AUTOMATIC LIGHTING DEVICE FOR BICYCLE OR OTHER LAMPS.

SPECIFICATION forming part of Letters Patent No. 551,084, dated December 10, 1895.

Application filed June 20, 1895. Serial No. 553,385. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH H. LEHMAN, a citizen of the United States, and a resident of the city and county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Automatic Lighting Devices for Bicycle or other Lamps, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, of which—

Figure 1 is an elevation of the oil-receptacle and burner of a lamp to which my device is applied. Fig. 2 is a plan view of Fig. 1. Fig. 3 represents the lighting device detached and the parts thereof separated, A showing the interior of the tinder-strip-containing box and B the cap or cover thereof. Fig. 4 shows the rear side of the box with the circular spring-pawl on the end of the arbor removed. Fig. 5 is an elevation of the arbor and adjuncts.

The main object of this invention is to provide a readily attachable and detachable tinder-strip lighting device for bicycle and similar lamps, although the invention relates also to certain details of construction of the device, which will be hereinafter specified.

Referring to the annexed drawings, forming a part of this specification, C is an oblong box, having a detachable side or cover C C. At the top of the box on the edge that is intended to come adjacent to the burner of the lamp is a nose *c'*, open toward the wick. Through this nose passes a transverse pin *e*, upon which is a small roller *e'* that constitutes a bearing for the movable tinder-strip, as hereinafter explained.

F is an arbor that extends through the box C and is provided with a handle *f'*, which screws onto its free end, whereby the arbor may be rotated from the outside of the lamp.

T is the usual tinder-strip, consisting of a ribbon of paper or the like having a series of fulminate pellets *t'* at intervals thereon. This strip is coiled around a stud *g* below the arbor, with the pellets on the outer side, and its free end is brought up around the roller-bearing *e'* and is then passed into a retaining-slit *t²*, Fig. 5, in the arbor. A scratching-pin *p* is secured on the top of the box, preferably to the detachable side C C, as shown. Its point

extends over and in contact with the exposed portion of the tinder-strip—that is to say, in the path of the pellets thereon.

K, Figs. 2, 4, and 5, is a series of circularly-disposed ratchet-teeth on the side of the box encircling the end of the arbor F, and L is a corresponding circular pawl on the end of the latter. This consists, in the present instance, of a disk of steel or brass cut or split to form a limb *l'*, Figs. 2, 4, and 5, which is bent in toward said ratchet-teeth, thereby constituting a spring tooth or pawl adapted to act in conjunction with said ratchet-teeth, in order to prevent the arbor and consequently the tinder-strip from being turned backward. The part of the tinder-strip on the arbor and extending through the slit *t²* prevents the arbor from being accidentally pushed back or through and disengaging the pawl from the ratchet-teeth.

M, Figs. 1 and 2, is a plate elevated above the oil-receptacle R, through which the wick-tube *w* of the lamp projects, and at *n*, Figs. 1 and 2, is a slot in the top of plate M at right angles to and extending toward the side of the wick-tube. This slot is adapted to neatly receive the box C in the vertical position shown and whose lower end may rest upon the top of the oil-receptacle R, the top or exposed portion of the tinder-strip being adjacent to the wick *w'* when the box is in place, as seen in Fig. 1. In order that the inner edge of the box may approach more nearly to the wick I usually cut a slit at *n'*, Figs. 1 and 2, in the cone *o* around the wick-tube.

Having thus described the construction of my invention, I shall now proceed to explain its operation, as follows: To light the lamp the wick is turned to a suitable height. The arbor is now rotated by handle *f'*, whereupon the tinder-strip is advanced and a fulminate pellet impinging against the point of the scratch-pin *p* is ignited and lights the wick in the usual manner. At the same time that the used or waste portion is wound upon the arbor a like portion unwinds from the coil upon the stud *g*. When the entire strip has been used up it will be wound upon the arbor. The tinder-box may then be removed from the lamp and the side C C taken off and a fresh strip applied, as before, and so on.

It will be observed that the scratching pin or point which is upon the removable side plate or cover is entirely out of the way where it cannot scratch or injure the band when the said plate or cover is removed to fill the box with a new coil of pellet-strip.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

10 The combination with the oil receptacle of a bicycle or similar lamp, of a plate as M supported upon and above the said oil receptacle, said plate having a slot therein to one side of the wick tube, the box C held in vertical position in the said slot, said box having
15 a removable side cover C C and provided at

its upper end with a short slotted nose which extends toward the wick, the bearing roller journaled in the said slot, the tinder carrying and waste receiving arbors journaled in the said box, means for preventing the said carrying arbor from being rotated backwardly, and a scratching pin or point carried by the said removable side cover, and removable therewith, substantially as specified. 20 25

In testimony whereof I have hereunto affixed my signature in the presence of two subscribing witnesses.

JOSEPH H. LEHMAN.

Witnesses:

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