(No Model.)

A. P. LLOYD & F. Y. MacDONALD.

LIGHTING DEVICE FOR STREET LAMPS.

No. 315,802. Patented Apr. 14, 1885.

Fig. 1.

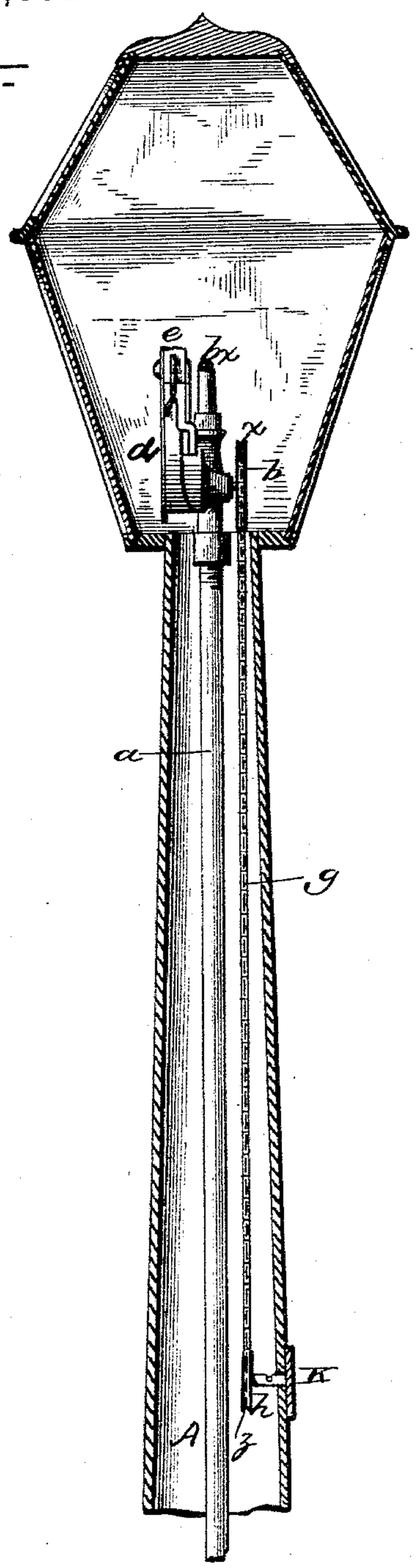


Fig. 2.

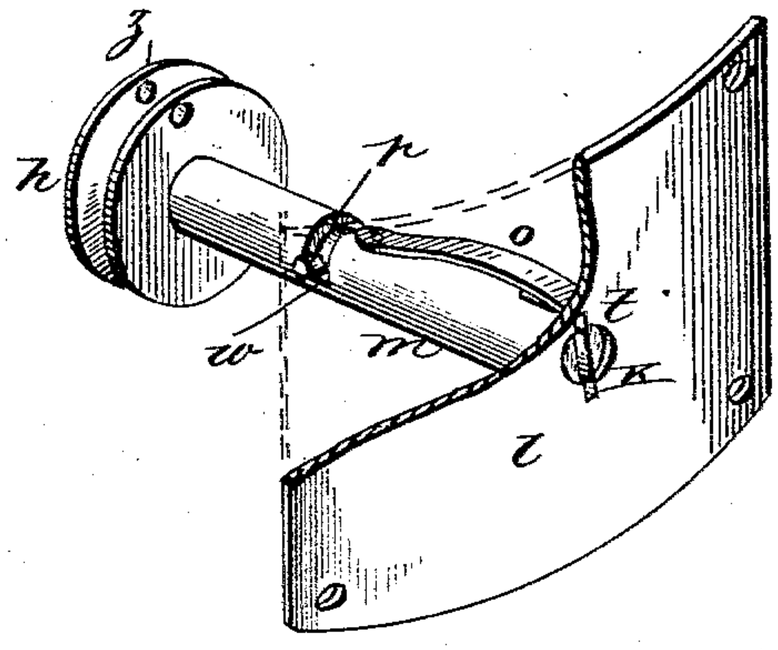


Fig. 3.

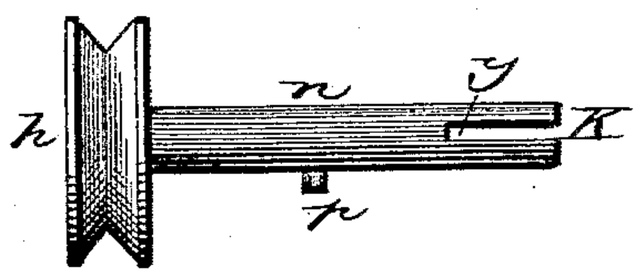


Fig. 4.

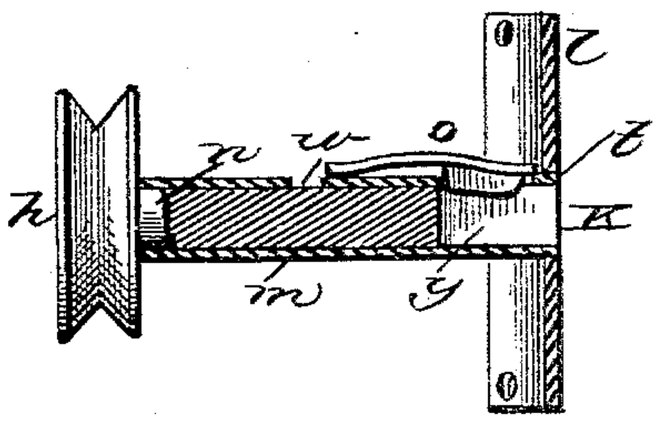
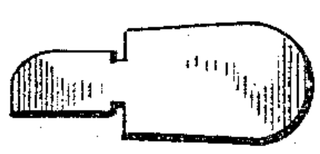


Fig. 5.



WITNESSES

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LIGHTING DEVICE FOR STREET-LAMPS.

SPECIFICATION forming part of Letters Patent No. 315,802, dated April 14, 1885.

Application filed June 3, 1884. (No model.)

To all whom it may concern:

Be it known that we, A. PARLETT LLOYD and FRANK Y. MACDONALD, citizens of the United States of America, residing at Baltimore, in the county of Baltimore and State of Maryland, have invented certain new and useful Improvements in Lighting-Street-Lamp Devices; and we do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

Heretofore and at the present time the cost of lighting street-lamps has been and is now a considerable item of expenditure in municipal corporations, it having always been considered, to the best of our knowledge and belief, necessary, wherever street gas-lamps are used, to employ labor for the especial purpose of lighting and extinguishing said lamps.

Now, the object of our invention or device is to obviate this expenditure by applying a simple contrivance to lamps already in use or to be hereafter constructed, by means of which the police or other officers of cities and towns can instantaneously light or extinguish said street-lamps without the trouble or inconvenience of carrying a ladder or matches or anything whatsoever to perform this duty other than a very small key, to be hereinafter described.

Besides saving the expense of lamp-lighters, our invention will economize gas, for should the police become the custodians of the light they, being constantly upon the street, can regulate or extinguish the lights as the natural luminaries may demand. For instance, if the moon rises at ten p. m., the lamps need not burn until five a. m. the next day; but if at twelve midnight the patrolmen find the moon giving light enough without the lamps they can extinguish them, and thus save the amount of gas that would be consumed in five hours; or, on the other hand, should the sky become cloudy and the moon be obscured and light be needed, the same parties can light the city without inconvenience.

Many other advantages to be derived from such an invention will suggest themselves.

The contrivance by which we accomplish these objects is illustrated in the accompanying drawings, in which Figure 1 is a vertical section of a street-lamp, showing the entire working of our device. Fig. 2 is a lock-like device as it appears after being removed from the lamp-post in Fig. 1, the construction and attachment of which we claim as entirely original. Fig. 3 shows the cylinder *n n*. Fig. 4 is a section of the lock device, showing the working of the spring *o* in the groove *k y*. Fig. 5 is the key used.

Similar letters refer to similar parts throughout all the views.

Referring to Fig. 1, the self-lighting fulminate attachment *d e b bx* was invented by Edward L. Megill, and patented June 17, 1857, and improved October 6, 1874, No. 155,770, and March 16, 1875, No. 160,932, and we do not claim to have originated the same.

In our invention we propose to utilize this contrivance by connecting it with our device, Fig. 2, and by this union of devices a key inserted at K, Fig. 1, and turned in the lock *h k* turns on and lights the gas at *bx*.

Again referring to Fig. 1, A is the gas-supply pipe. When the wheel *b* makes about one-fourth a revolution, a valve is opened, letting on the gas, and at the same time a spring-hammer strikes a fulminate at *e*, causing a percussion, which ignites the gas. The workings of this invention are fully set forth in the papers of Letters Patent No. 155,770.

In Fig. 2, *l* is a plate or disk, of copper or other metal, made to conform with the outer surface of the lamp-post. *m* is a hollow tube affixed firmly to *l* at *t*, (which is the circumference of a flat circle taken from *l*.) *n*, Fig. 4, is a cylinder which fits snugly in tube *m*, and to which there is attached firmly a wheel at *h*. Tube *m* is slotted from *p* to *w*, Fig. 2, so that when the cylinder *n*, Fig. 4, turns in tube *m* a pin or plug, *p*, Fig. 2, made in said cylinder, prevents it making more than one-half a revolution. Cylinder *n n* is grooved, as in Fig. 3, at *k y*, and when it completes a half-revolution the spring *o*, Fig. 2, falls into said groove and prevents any ordinary flat key from being admitted at *k*. *h* is a small wheel, which, being made fast to cylinder *n n*, will turn whenever it turns. Now, applying Fig. 2 to Fig. 1 at *h k*, and connecting wheel *b* with

wheel *h* by an endless chain, *g*, made fast to wheels at *x* and *z*, we insert the key, Fig. 4, at the key-hole *k*, Fig. 1; (but this is shown better in Fig. 2.) It lifts up the spring *o*, and cylinder *n n* is free to turn. We turn the key and the cylinder *n n*, and the wheel *h* will make half a revolution, (or until the pin or plug *p* stops it from going farther,) by this one half-revolution turning on and lighting the gas at *bx*. Let the key be withdrawn, and the spring *o* falls into groove to hold cylinder *n n* fast, and preventing an ordinary flat key being used.

In the foregoing operation the wheel *b* will revolve in proportion as the ratio of its circumference is to the circumference of the wheel *h*, and the wheel *h* is constructed of a size that one-half its circumference will be equal to one-fourth that of the wheel *b*, or just enough, when turned by key, Fig. 4, to cause the fulminate contrivance *d e bx c b* to turn on and ignite the gas. Reversing the operation extinguishes the same.

We are aware that prior to our invention the self-lighting contrivance *d e bx c b*, Fig. 1, has been patented and used. We therefore do no not claim such part of the machine; but

What we claim, and desire to secure by Letters Patent, is—

1. In a street-lamp, the fulminate lighting device located at the burner, and the operating locking device located away from the burner, in combination with the intermediate connecting device, *h g b*, as set forth.

2. In a street-lamp, the fulminate lighting device located at the burner, and the intermediate connecting device, *h g b*, in combination with the locking device consisting of the tube *m*, having the slot, the cylinder *n* in such tube, and having the plug *p* and the notch, and the spring *o*, all combined and arranged as and for the purpose set forth.

In testimony whereof we affix our signatures in presence of two witnesses.

A. PARLETT LLOYD.
FRANK Y. MACDONALD.

Witnesses.
R. H. CARL,
THOS. A. CAMPBELL.