

(No Model.)

C. E. GRANNISS.

SAFETY CAR LAMP.

No. 252,098.

Patented Jan. 10, 1882.

Fig 1

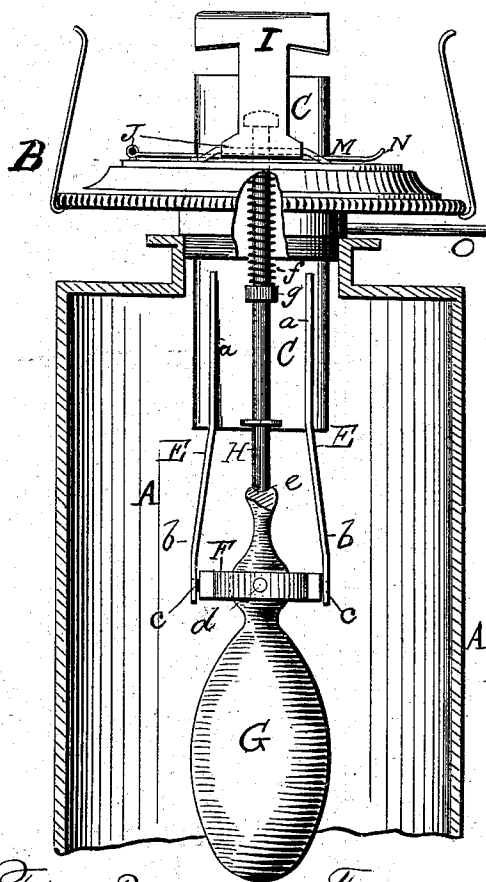


Fig 2

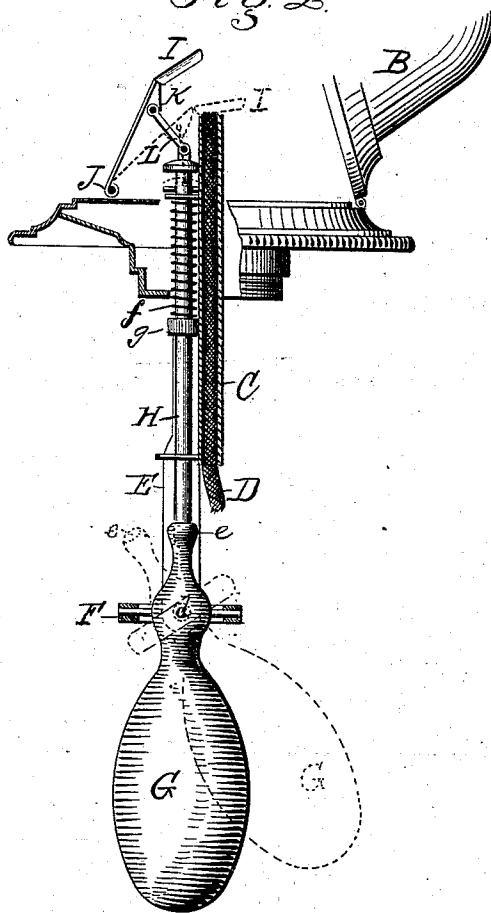


Fig 3

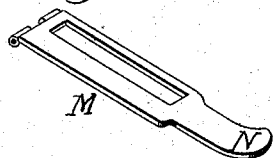


Fig 4

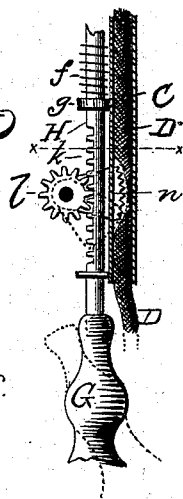
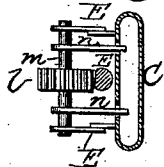


Fig 5



Witnesses
L. E. Jones
W. Brown

Inventor.
Chas E. Granniss
By A. O'Neill and Chas. J. Good
Atty.

UNITED STATES PATENT OFFICE.

CHARLES E. GRANNISS, OF NEW HAVEN, CONNECTICUT.

SAFETY CAR-LAMP.

"SPECIFICATION forming part of Letters Patent No. 252,098, dated January 10, 1882.

Application filed July 23, 1881. (No model.)

To all whom it may concern:

Be it known that I, CHARLES E. GRANNISS, a citizen of the United States, residing at New Haven, in the county of New Haven and State of Connecticut, have invented certain new and useful Improvements in Safety Car-Lamps; and I do hereby 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 letters or figures of reference marked thereon, which form a part of this specification.

15 This invention consists, as hereinafter described and claimed, in an attachment for railway-car and other lamps, whereby the flame will be surely and automatically extinguished upon the lamp being overturned or subjected
20 to concussion.

In the drawings, Figure 1 represents a sectional elevation, showing a portion of a lamp with my improvement applied thereto. Fig. 2 is a side elevation, partly in section, of my attachment secured to a lamp-burner. Fig. 3 shows in detail a portion of the mechanism, and Figs. 4 and 5 show modifications.

This attachment, while more especially designed for application to car-lamps to insure the automatic and instantaneous extinguishment of the flame of the lamp in the event of a collision or other accident occurring where the overturning or presence in said cars of a
30 lighted lamp would be a source of danger, is also adapted for application to lamps of various constructions used in vehicles, buildings, and other places.

A represents the body or oil-reservoir of a lamp of any suitable construction.

40 B is the burner, of ordinary construction.

C is the wick-tube, and D the wick. To one side of the wick-tube C are secured the upper ends, *a a*, of the rods or plates E E. The upper ends, *a*, are straight, as shown, to adapt them to be readily secured to the tube C. These
45 rods or plates E extend down beyond the bottom of the wick-tube, from which point they flare outwardly, as at *b b*. The lower ends are perforated or recessed to receive the trunnions or pivots *c c*, upon which is swiveled a ring, F. Within this ring F is pivoted, upon trunnions

or pivots *d*, arranged transversely of the position of the trunnions or pivots *c*, a weight or pendulum, G. By means of these pivotal connections of the weight to the ring and the ring
55 to the rods or plates said weight is capable of a rocking movement in any desired horizontal direction. Within the top of this weight or pendulum I form a recess, *e*, to receive the lower end of a rod, H. This recess *e* may be of any
60 depth desired, according to the amount of concussion it is desired the lamp shall withstand, a shallow recess admitting of the pendulum being forced away from the rod more easily than when the recess is deep, as will be hereinafter explained. The rod H is encircled at
65 its upper end by a spiral spring, *f*, resting at its lower end on a collar, *g*, upon the rod, and secured at its upper end in any suitable manner to admit of the vertical spring movement
70 of the rod.

I is a hooded extinguisher, which is hinged at J to the lamp-burner, and is pivoted at K to a hinge-jointed rod, L, whose lower end is attached to the upper end of the spring-rod H,
75 as clearly shown in Fig. 2, so that on the upward movement of said rod H, to raise the extinguisher to permit of the lighting of the lamp, said extinguisher will have imparted to it both a vertical and a rearwardly-horizontal move-
80 ment, and on the downward movement of said rod H will descend vertically, and move also in a forward horizontal direction, as shown in dotted lines, Fig. 2, to cover the wick-tube and extinguish the flame.

85 M represents a slotted spring-plate, hinged at one end, *h*, to the burner, and when the rod H is in its raised position, springing up to afford support thereto, the button or boss *i* resting upon said spring-plate M and affording a
90 bearing-surface for said plate to operate upon. The free end of the plate M is curved upwardly at N, in order that it may be readily raised, the raising of which draws up the rod H and allows its lower end to enter the depressed
95 upper end of the pendulum. O represents the wick-raising device, which is of ordinary construction.

In the modification shown in Figs. 4 and 5 I have shown a device for drawing down the
100 wick on the pendulum being jarred out of vertical position on being subjected to concussion.

In this construction I dispense with the hooded extinguisher, and in lieu thereof I serrate the lower part of the rod H at *k*. A spur-wheel, *l*, is mounted upon a short shaft or cross-bar, *m*, secured with capability of rotation therein in the rods or plates E. One or more segments, *n*, are mounted upon the shaft *m*, with their serrated faces engaging the wick, as shown in Fig. 4. On the pendulum being jarred out of engagement with the rod H the rod will fall and cause the spur-wheel *l* to revolve, which in turn imparts a rotary movement to the cross-bar or shaft *m*, and, forcing the segment or segments *n* down at the same time, draws the wick down below the top of the wick-tube, thereby effectually extinguishing the flame.

The device herein described and shown is a very efficient self-acting lamp-extinguisher, as, on the lamp being subjected to more than an ordinary jarring, such as being knocked down or shaken by the vehicle or car to which it is secured being overturned or coming into collision with another object, the concussion will cause the pendulum to swing away from the rod H. The rod H will then drop down, and either force the extinguisher I down upon the top of the wick or draw the wick down within the tube, as the case may be, depending upon which arrangement of devices herein described is used.

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

1. The combination of the pendulum or weight G, having recess *e* in its top, ring F, trunnions or pivots *c d*, rods or plates E, rod H, and encircling spring *f*, and the hooded extinguisher I, pivotally connected to the top of the rod H, substantially as and for the purpose set forth.

2. The combination of weight G, ring F, pivots *c d*, spring-rod H, hooded extinguisher I, and hinged lever M.

3. The combination of the weight or pendulum G, having recessed upper end, the spring-rod H, adapted to rest within the recessed portion of said weight, the rods or plates E, flaring at their lower ends, the ring F, pivoted at *c* to said rods, and having pivots *d*, upon which the weight or pendulum G is supported, the hooded extinguisher I, secured to the top of the rod H, and the hinged lever M, substantially as and for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES E. GRANNISS.

Witnesses:

ELE MIX,

JULIEN W. CRAMER.