(No Model.)

T. BURNS.

EXTINGUISHER FOR LAMP BURNERS.

No. 270,631. Patented Jan. 16, 1883.

Fig. 1.

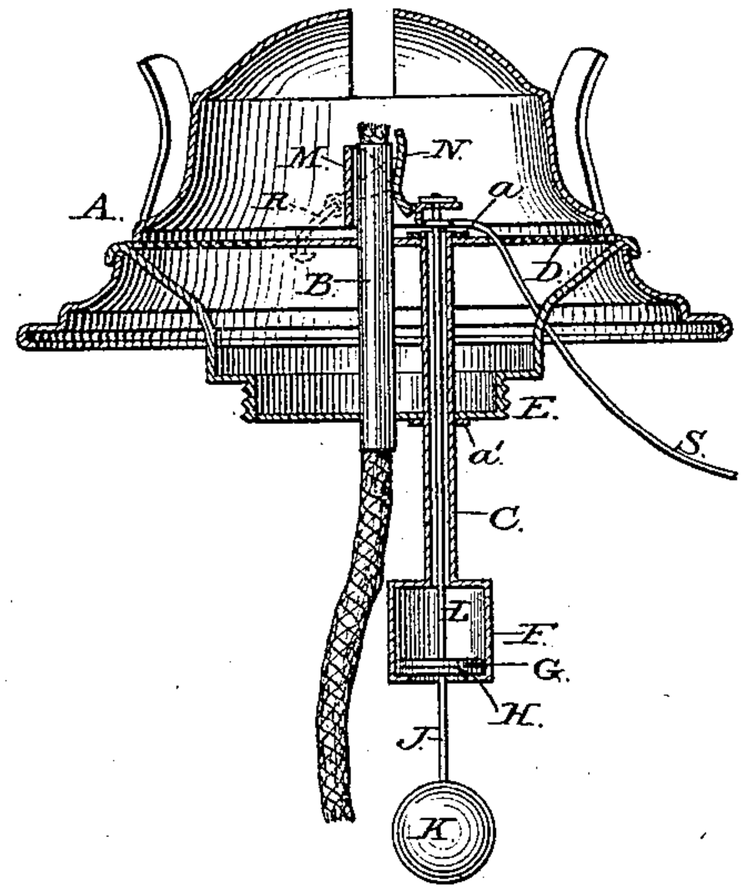


Fig. 3.

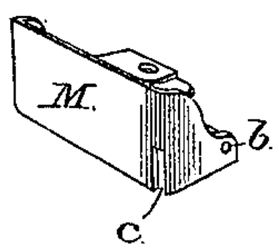
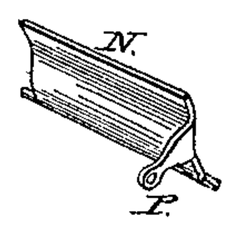


Fig. 2.

Fig. 4.



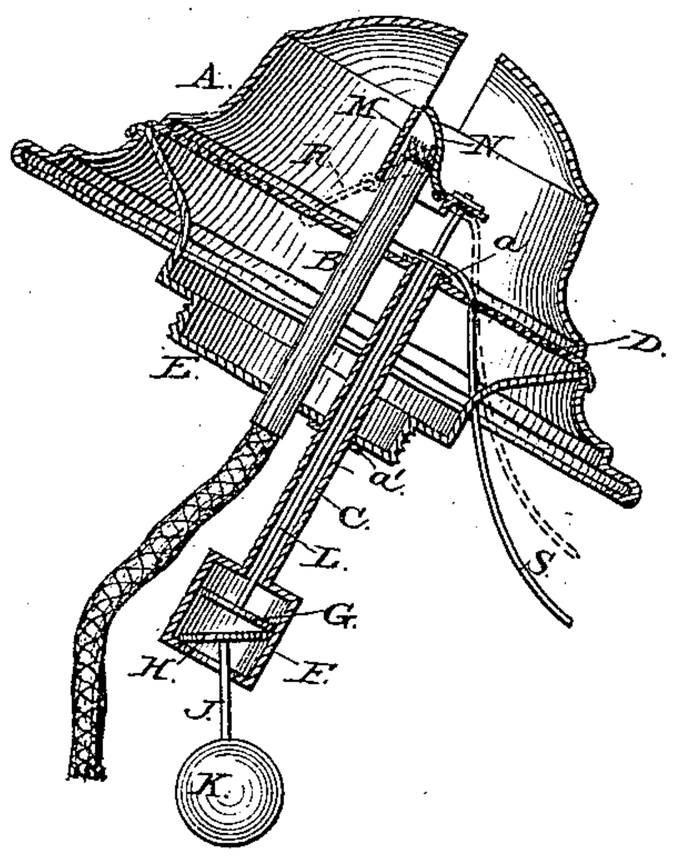
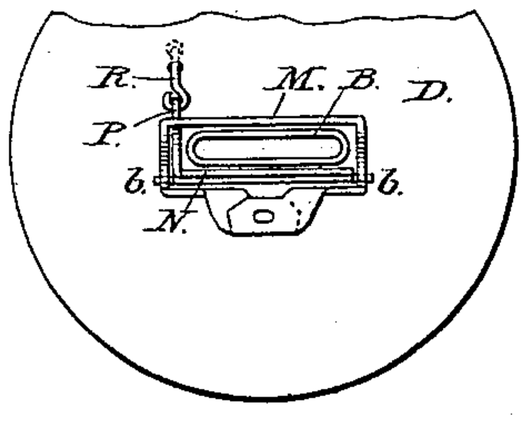


Fig. 5.



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UNITED STATES PATENT OFFICE.

THOMAS BURNS, OF BROOKLYN, NEW YORK.

EXTINGUISHER FOR LAMP-BURNERS.

SPECIFICATION forming part of Letters Patent No. 270,631, dated January 16, 1883.

Application filed July 8, 1882. (No model.)

To all whom it may concern:

Be it known that I, THOMAS BURNS, of Brooklyn, in the county of Kings and State of New York, have invented a new and useful Improvement in Extinguishers for Lamp-Burners; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

My invention relates to an automatic extinguisher for kerosene or fluid lamps, having for its object an extinguishment of the flame by simple mechanical means, as hereinafter fully described, whenever the lamp is tipped to a dangerous extent from its normal position.

In the accompanying drawings, Figure 1 is a central transverse section of a lamp-burner with my improved extinguishing device attached thereto; Fig. 2, a similar section of the same burner, tipped over, illustrating the operation of my device in automatically extinguishing the lamp. Figs. 3 and 4 are perspective views of the two plates, respectively, which, hinged together and moving up on the wick-tube, serve to extinguish the lamp. Fig. 4 is a detailed top view of the extinguishing-plates.

A represents a kerosene-lamp burner of any approved construction, and B its wick-tube.

C is a small tube, inserted parallel with the wick-tube through the upper and lower transverse plates, D E, of the burner. The outside of the tube is threaded, and the tube is secured, by nuts *a a'* screwing thereon, against the upper and lower plates, D E, as shown in the drawings. The lower end of the tube C is secured centrally to the top of a cylindrical case, F, in which are loosely fitted two circular disks, G H, the one resting upon the other. To the center of the lower disk, G, is secured a rod, J, which extends out therefrom through an aperture in the bottom of the cylinder F, and terminates in a weight, K. From the center of the upper disk, H, a rod, L, extends upward through the tube C to a point above the upper plate, D, of the burner.

As the rod J will always maintain a perpendicular position under the influence of the weight K, suspended therefrom, and thus keep its attached disk H in a horizontal plane, if the tube C be tipped from its vertical position, its disk G, becoming inclined thereby to the plane of the disk H, will force the rod L upward and outward, and this outward movement of the rod is employed to move an extinguishing device upon the wick-tube.

For use with flat wick-tubes two plates, M and N, are arranged to be closed over the top of the tube by the movement of the rod L, and shut off air from the flame for its extinguishment. The plate M is stamped out of sheet metal, and adapted to fit flatly against one side of the wick-tube of the burner, parallel thereto, while its ends are bent and carried around the ends of the wick-tube to intersect centrally on its opposite side, offsets therefrom being made to overlap in a plane in right angles to the tube, and afford a bearing to which the upper end of the rod L is secured. (See Fig. 5.) The opposite plate, N, is also stamped out of sheet metal and adapted to fit the opposite side of the wick-tube, but with a curved cross-section, as shown in Fig. 4. This plate N is pivoted at either end to the ends of the plate M, as shown at *b*, Fig. 3, and in Fig. 5. An arm, P, (see Figs. 4 and 5,) projects from one end of the plate N above its pivot to extend through a slot, *c*, Fig. 3, cut in the plate M near to its end, and this arm is connected by a wire link, R, (see Fig. 5, and dotted lines, Figs. 1 and 2,) to the transverse plate D of the burner, the link being allowed a limited play in the plate D. When the plate M is moved upward upon the wick-tube the plate N is carried up with it, but its arm P, connected to the plate of the burner by means of the link R, causes its upper edge, soon after it rises above the wick-tube, to tip and close against the plate M over the top of the wick-tube and wick, as shown in Fig. 2. The plate M is carried upward automatically, when the lamp is tipped in any direction, by the movement of the rod L, produced by means of the disks G H and weight K, suspended within the lamp, as described; or it may be pushed up at will by means of a wire, S, which is secured to a ring or collar encircling the upper end of the rod L under the plate N and extending thence to the outside of the burner. The attachment of the tube C to the burner by means of the nuts *a a'* permits of an adjustment of the rod

and its disk with reference to the extinguishing-slides M N, so as to properly regulate their movement. The tube C serves not only as a conductor for the rod L, but as a vent for the front of the lamp, through which any gas collecting therein will find ready escape.

It is evident that the movement of the rod L, produced whenever the lamp is tipped in any direction by means of the gravity of the weight K and the intervention of the disks G and H, may be employed to move suitable extinguishing-slides fitted upon an Argand burner; and I contemplate the application of this feature of my invention to all styles of kerosene or fluid lamp burners.

I claim as my invention—

1. The combination, in a lamp-extinguishing device, of a disk or plate, H, supported within a suitable case beneath the burner, a weight, K, suspended from the plate H by a rigid connection, a second disk or plate, G, resting loosely upon the first plate, H, and a rod, L, connecting the plate G with an extinguishing slide or slides upon the wick-tube of the burner, substantially in the manner and for the purpose herein set forth.

2. The combination, with each other and with the wick-tube of a lamp-burner, of the plate N, hinged to the movable plate M, and provided with an arm, P, held by a link, R, attached to the burner so as to be tipped over the top of the burner as the plate M rises thereon, substantially in the manner and for the purpose herein set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

THOMAS BURNS.

Witnesses:
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