W. A. MOFFETT & R. P. PERKINS.

OCCULTING DEVICE FOR LIGHTS.

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1,077,202.

Patented Oct. 28, 1913.

Fig. 1.

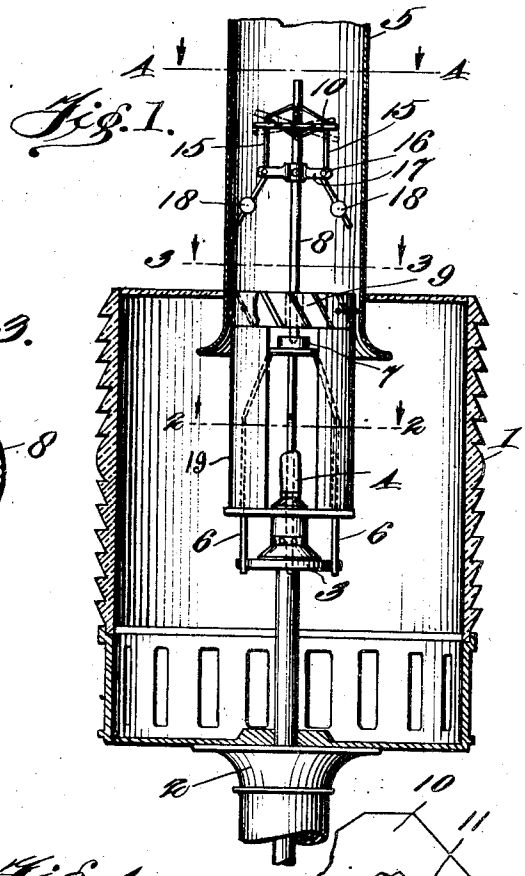


Fig. 3.

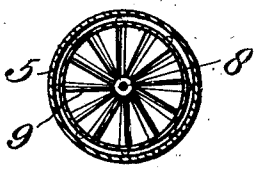


Fig. 2.

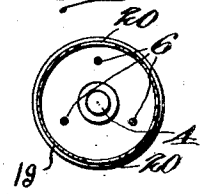


Fig. 4.

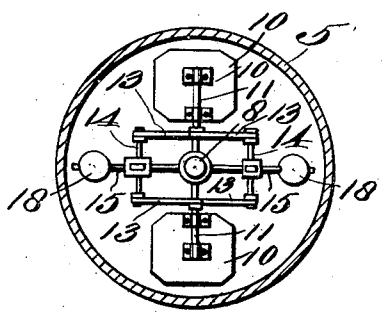
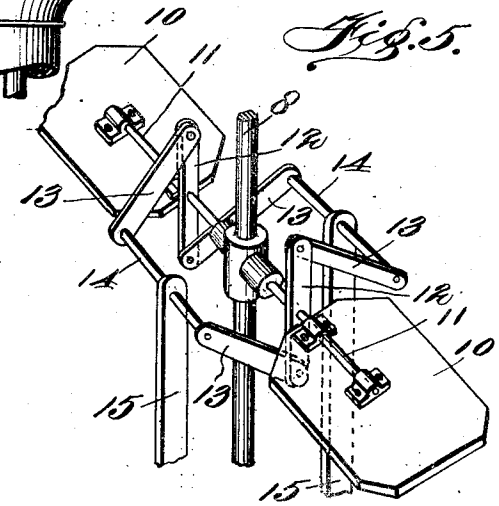


Fig. 5.



Witnesses

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UNITED STATES PATENT OFFICE.

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OCCULTING DEVICE FOR LIGHTS.

1,077,202. Specification of Letters Patent. Patented Oct. 28, 1913.

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To all whom it may concern:

Be it known that we, WILLIAM A. MOFFETT and RAYMOND P. PERKINS, citizens of the United States, residing at San Francisco, in the county of San Francisco and State of California, have invented certain new and useful Improvements in Occulting Devices for Lights; and we 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.

Our invention relates to an improved occulting device for lamps or other sources of light, and it consists in the constructions, combinations and arrangements herein described and claimed.

An object of our invention is to provide an improved occulting device for lamps, which will be actuated and controlled by air currents produced by the heat of the lamp.

A further object of our invention is to provide a reliable and economical occulting device adapted for use in light houses for producing a flashing light having regular characteristics of predetermined light and dark periods, which can be easily distinguished as a signal light.

A further object of our invention is to provide a compact and efficient occulting device adapted to be readily attached to the existing types of lamps in the light house service.

In the accompanying drawings forming a part of this application, and in which similar reference symbols indicate corresponding parts in the several views:—Figure 1 is a vertical axial section of an oil vapor lamp, such as employed in light houses, with one embodiment of our invention applied thereto; Fig. 2 is a section on the line 2—2 of Fig. 1; Fig. 3 is a section on the line 3—3 of Fig. 1; Fig. 4 is a section on the line 4—4 of Fig. 1 on an enlarged scale; and Fig. 5 is a fragmentary perspective view of the adjustable and reversing fan blades and the governor connections thereto.

Referring to the drawings, 1 indicates any usual lens supported on a pedestal 2, concentrically about the stand 3 of a lamp 4; said lamp being provided with a chimney, or stack, 5 through which passes a current of air produced by the heat of the lamp. Legs 6 are secured to the lamp stand 3 for supporting a bearing block, preferably a jewel bearing 7, for the lower end of the vertical shaft 8 of a turbine fan wheel 9. Adjustable and reversing fan blades 10 are clamped on spindles 11 extending radially from the motor shaft 8; double crank arms 12 being rigidly secured to said spindles 11, and having their opposite ends connected by links 13 to cross rods 14. The rods 14 extend through bent governor arms 15, which are pivoted at 16 on a bracket 17 secured to the motor shaft 8, and carry centrifugal weights 18; if desired, said weights 18 can be adjustably secured on the governor arms in any usual manner, as by set screws.

As shown especially in Fig. 4, the reversible blades 10 extend across a relatively small portion of the chimney 5, thereby permitting a free unimpeded draft through the chimney in all adjusted positions of said blades, and preventing irregular burning and smoking of the lamp by a dampening or checking action on the draft.

A cylindrical screen 19 is secured to the motor 9, or otherwise carried by the motor shaft 8, concentrically about the lamp 4; said screen being provided with one or more openings 20 for permitting the passage of light rays from the lamp to produce the desired flashing effect. The screen 19 can be advantageously formed of sections spaced apart a sufficient distance for the desired passage of light rays.

In the operation of our invention, the upward current of air created in the chimney 12 by the heat of the lamp will drive the air motor 9 and thus rotate the screen 19 about the lamp. Should the velocity of the air current increase and drive the motor 9 at a speed above its normal rate of revolution, the governor weights 18 will be thrown out by centrifugal force and shift the blades 10 to a less efficient angle, or even reverse said blades to produce a drag or braking action on the rotation of the motor shaft 8. On the other hand, should the velocity of the air current through the chimney decrease, the governor weights 18 will approach the shaft 8 and shift the fan blades 10 to a more efficient angle for actuation by the air current, thereby giving an increased driving action of said fan blades for augmenting the driving action of the motor 9 to maintain the speed of said motor and of the screen 19 constant.

From the above description, it will be clear that our invention provides a reliable

and compact occulting device constructed to insure the maintenance under all practical conditions of a flashing light having any predetermined light and dark periods.

We have illustrated and described preferred and satisfactory constructions, but changes could be made within the spirit and scope of our invention.

We claim:—

1. In combination with a lamp, a movable screen for occulting the light rays thereof, a draft chimney for said lamp, means actuated by the draft in said chimney for operating said movable screen, and shiftable means within said chimney for regulating the operation of said screen, said shiftable means being constructed to permit a free unimpeded draft through said chimney under all practical conditions.

2. In combination with a lamp, a movable screen for occulting the light rays thereof, a draft chimney for said lamp, a draft motor in said chimney for operating said movable screen, reversible blades extending across a relatively small portion of said chimney, a speed governor for controlling the position of said reversible blades, and connections between said blades and draft motor for regulating the operation of the latter.

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

WILLIAM A. MOFFETT.
RAYMOND P. PERKINS.

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GEO. H. PROBASCO,
R. BEHRENS.