# F. B. DE KERAVENAN.

## Lamp.

No. 37,659. Patented Feb. 10, 1863.

Fig. 3.

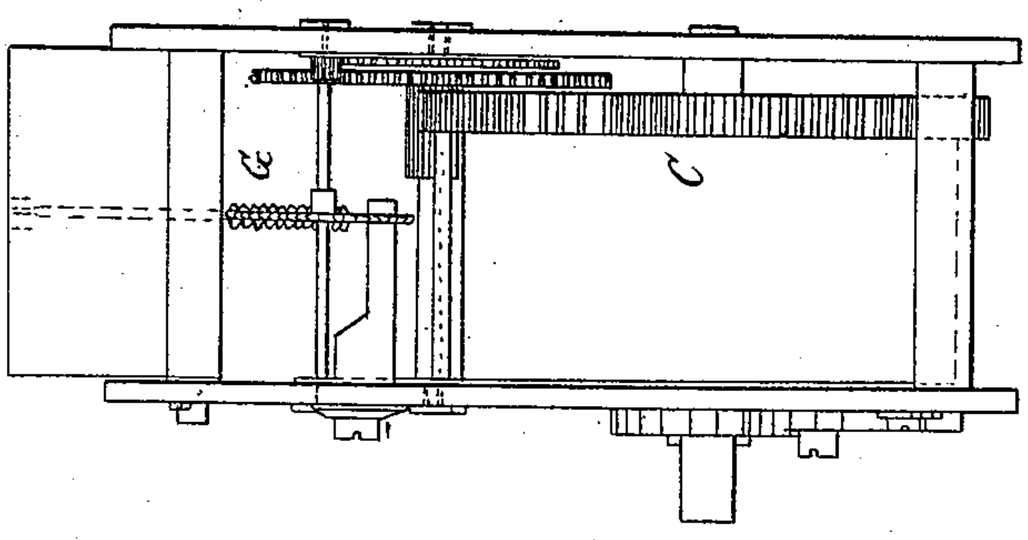



Fig. 2.

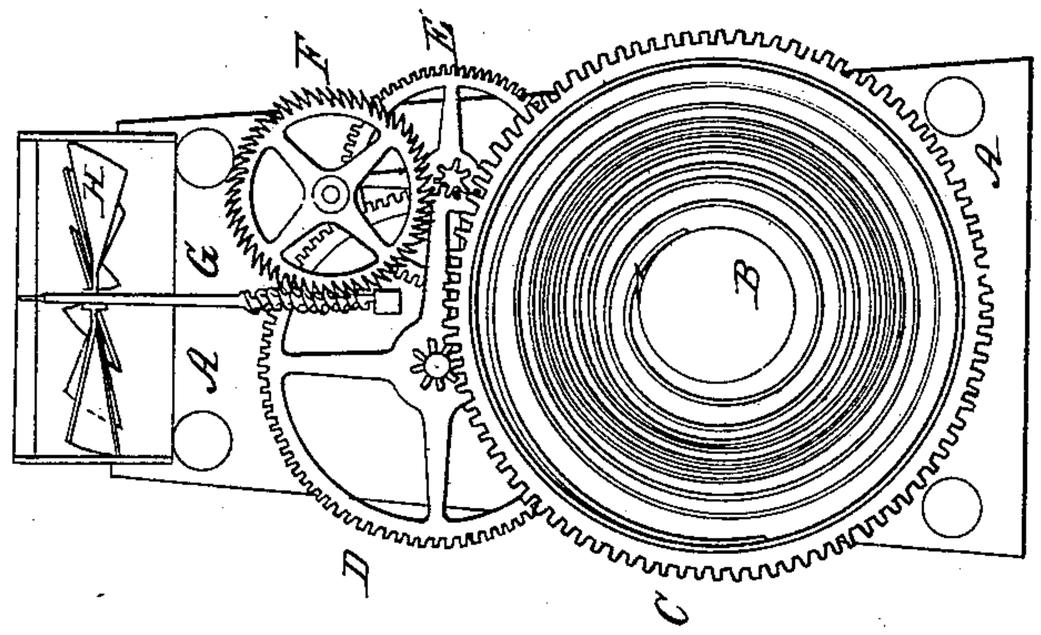



Fig. 4.

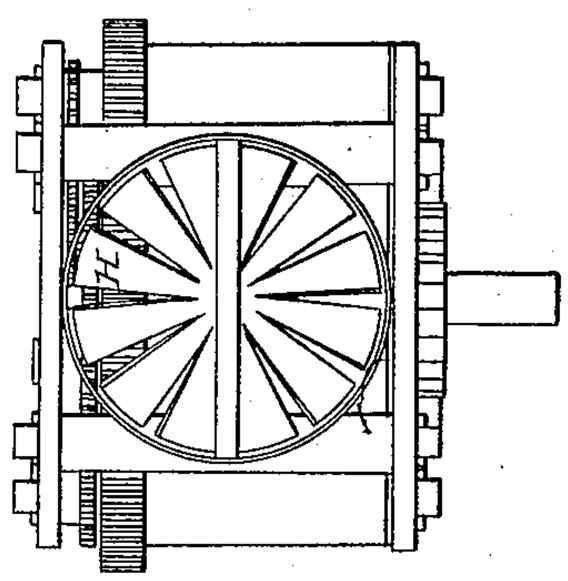
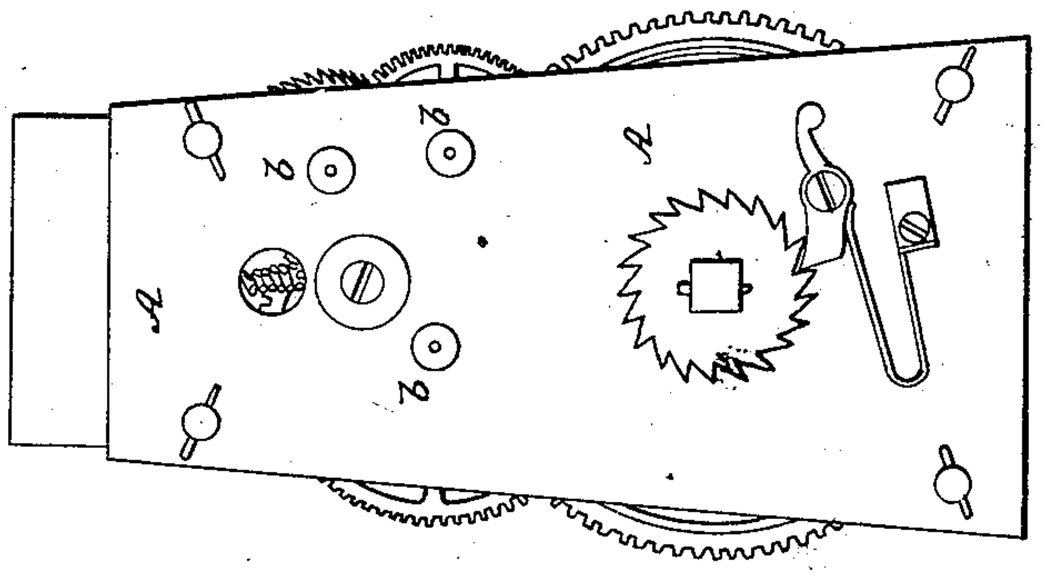



Fig. 1.




Witnesses:

Geo. T. B de Keravanan

L. D. Law

Inventor:

T. B. de Keravanay

# UNITED STATES PATENT OFFICE.

FRANCIS B. DE KERAVENAN, OF NEW YORK, N. Y., ASSIGNOR TO JOSEPH H. BAILEY AND GEORGE A. JONES, OF SAME PLACE.

## IMPROVED MECHANICAL MOVEMENT FOR LAMPS.

Specification forming part of Letters Patent No. **37,659**, dated February 10, 1863.

*To all whom it may concern:*

Be it known that I, FRANCIS BERNARD DE KERAVENAN, of France, but now residing in the city and State of New York, have invented a new and improved mechanical movement for producing an impelled current of air in lamps burning bituminous, kerosene, and other oils and fluids; and I do hereby declare that the following is a full, clear, and exact description thereof, and of its construction and mode or manner of operation, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

Figure 1 is a front view of one of the plates of the movement, and showing the bushing of the pivots. Fig. 2 is a sectional view of the mechanism with one case-plate removed, and showing the positions and relative proportions of the several wheels, &c. Fig. 3 is a side view of Fig. 1. Fig. 4 is a plan view of the mechanism.

This mechanical movement is designed for producing an impelled current of air to be supplied to the wicks of lamps similar in construction to that represented in Letters Patent of the United States granted to me on the 23d day of October, 1860. In such lamp the current of air was produced by the action of a blower worked by an ordinary wheel and pinion, which movement was, however, necessarily imperfect.

The chief merit of this kind of lamp is derived from the perfection of the mechanical movement. The conditions to be performed in a perfect and useful movement are, first, compactness of the apparatus; second, duration of time in running; third, sufficient rapidity of motion in the propelling apparatus to be effective; and, fourth, no noise in the movement, which would render the lamp inconvenient and disagreeable. The movement herein described unites these advantages. It is compact, will run from six to eight hours, has all necessary rapidity of movement to insure a sufficient quantity of air, and the mechanism runs without noise.

The movement consists of, first, a little cage or frame, A, of iron, used for strength and cheapness; second, pivot-holes *b b b*, bushed with brass, to ease the friction and preserve the pivots; third, a moving spring, B, inclosed in a barrel attached to a main toothed wheel, C; fourth, two multiplying toothed wheels, D E; fifth, a tangent wheel, F, working into the screw G and giving, through it, a great increase of motion to the propeller H, and without noise, which is unavoidable with the same speed obtained by ordinary gearing; sixth, a screw fan or propeller, H, with numerous inclined arms or planes working in air in the same manner that the screws of steam-vessels move through water—that is to say, in my movement the force derived from the spring drives the screw-propeller H, thus creating a current of air for the wick. In the vessel the power is derived from the steam-motor, the fulcrum being the water, and by reaction communicates motion to the boat.

The revolution of the screw-propeller H supplies a continuous current of air to the wick sufficient to feed or support combustion, and without any necessity for or aid from a chimney.

The drawings represent a movement of a full working size, such as is used in a lamp using a wick from three-quarters of an inch to an inch and a quarter in width. For other lamps of different sizes the mechanism will be reduced or enlarged, as may be required. For the smaller sizes it is believed that the screw-propeller H will be best adapted. In larger lamps a blower may be found more serviceable. In burning oils or fluids rich in carbon more air will be required.

Though the separate parts of this mechanism, taken by themselves, may exhibit nothing new, their combination as above specified, and the whole taken together, presents an application entirely special, quite new, and adapted to produce a new result—namely, the current of air necessary to create a good combustion of oils derived from bituminous and other oils and fluids without the aid of a chimney.

What I claim as my invention, and desire to secure by Letters Patent, is—

The general arrangement and combination of the mechanism herein described, and its use and application, for the purposes set forth.

F. B. DE KERAVENAN.

Witnesses:

Fme. F. B. DE KERAVENAN,

S. D. LAW.