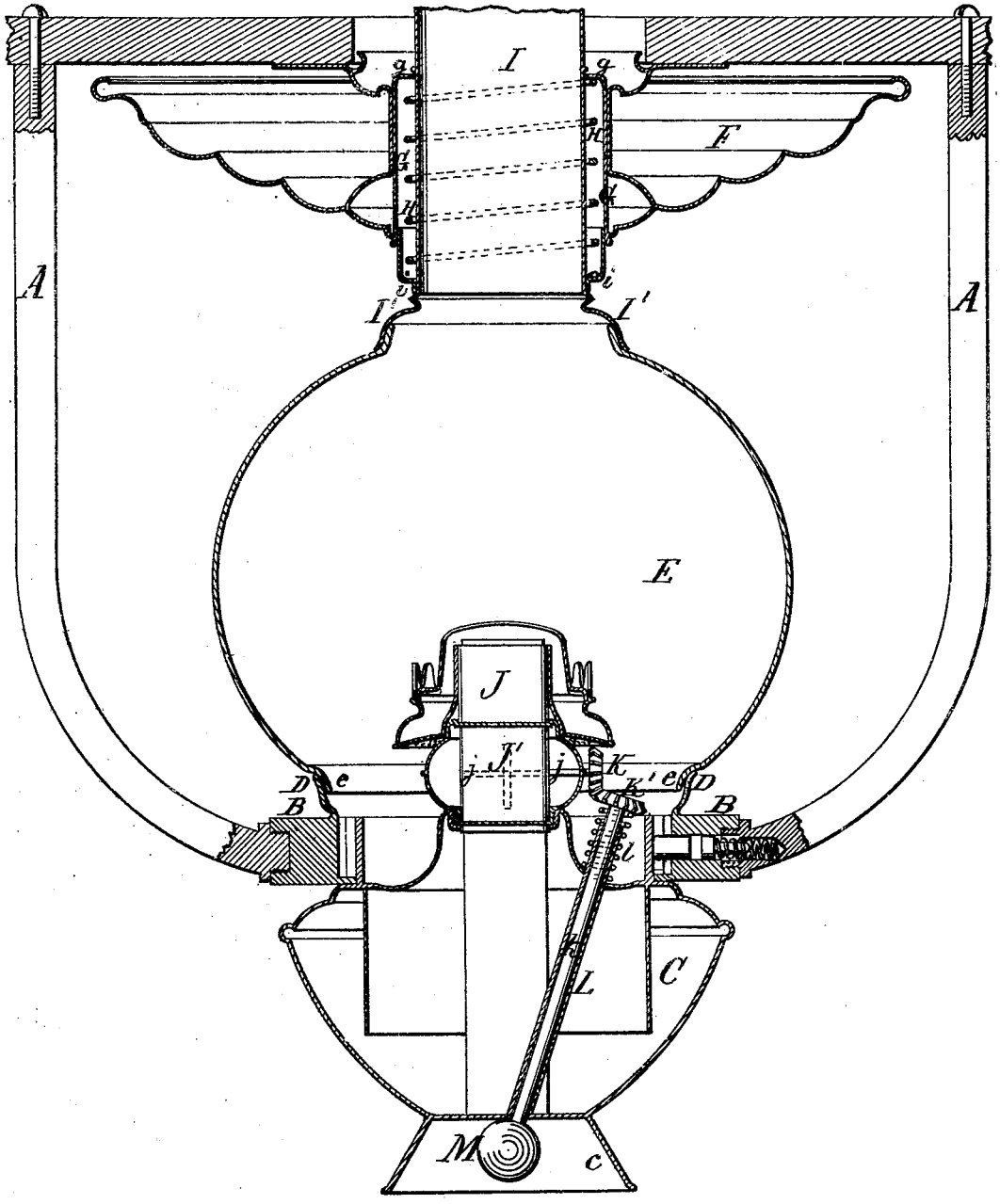
J. L. HOWARD.

WICK-ADJUSTER FOR LAMPS.

No. 183,057. Patented Oct. 10, 1876.



Witnesses:
James Martin Jr.
J. F. Theodore Laug.

Inventor:
James L. Howard
by
Mason, Fenwick & Lawrence
his attys.

JAMES R. OSGOOD & CO. BOSTON.

UNITED STATES PATENT OFFICE.

JAMES L. HOWARD, OF HARTFORD, CONNECTICUT, ASSIGNOR TO JAMES L. HOWARD & CO., OF SAME PLACE.

IMPROVEMENT IN WICK-ADJUSTERS FOR LAMPS.

Specification forming part of Letters Patent No. **183,057**, dated October 10, 1876; application filed September 14, 1876.

To all whom it may concern:

Be it known that I, JAMES L. HOWARD, of the city and county of Hartford, and State of Connecticut, have invented a new and useful Improvement in Center Lamps for Railroad-Cars, which improvement is fully set forth in the following specification, reference being had to the accompanying drawing, in which my improved lamp is represented by a central section.

The nature of my invention consists in an improvement in that description of device which has a shaft extended down through the body of the oil-reservoir, and on which shaft there is an operating button or thumb-head below the foot of the lamp, by turning which the flame of the lamp may be regulated without taking the globe or the lamp from their bearings, my said improvement greatly simplifying such adjusting device, and rendering the same more effective and less liable to get out of order.

In the accompanying drawings I have shown a central support for a car-lamp reservoir, which may be constructed as follows: A represents a number of bracket-arms fastened to the ceiling of a car, and having their lower ends attached to an annular bearing, B, in and by which the body C of a lamp is supported. The means for securing the lamp-reservoir C to the said bearings B may be of any suitable construction. The bearing B is at the top provided with a flaring rim, D, which fits around the lower part *e* of the glass globe E, and keeps it steady. Above the lamp C is the reflector F, fastened to the ceiling of the car, and provided with a central tube, G, into which a spiral spring, H, is inserted. An inner tube, I, is placed into the tube G, so that the said two tubes have the spring H between them. The upper end of the spring H rests against a top flange, *g*, of the tube G, and the lower end of the said spring rests upon a bottom flange, *i*, of the movable tube I. The lower end of the tube I is provided with a flaring socket, I′, which fits and bears upon the upper part of the glass globe E by means of the spring H, whereby the globe is securely held between its bearings.

The parts described form no part of my invention, the novel features therein being invented and claimed by Frank L. Howard and Charles P. Howard, of Hartford, Connecticut, and the description of the said parts is merely for the purpose of illustrating my invention in connection with a center globe-lamp for a car. I therefore do not claim any of the said parts separately nor in combination with my invention.

The reservoir C is provided with a wick tube or tubes, J, and spur-wheels J′ upon a shaft, *j*, for raising the wick, as shown in the drawings, partly by dotted lines. The horizontal shaft *j* of one of these wheels is seen in the drawings projecting out beyond its bearings upon the wick-tube, and is at its end provided with a bevel-gear, K. Another bevel-gear, K′, on an inclined shaft, *k*, gears into the bevel-gear K. The said bevel-gears are made of the same or about the same size, and they may be made of sheet metal stamped into shape between dies, and thus a very cheap wick-adjuster produced. The shaft *k* is inserted in a tube, L, which is fastened in the reservoir so that its lower opening is concentric with the foot *c* of the reservoir, and there the shaft *k* is provided with a button or knob, M, of spherical shape, which, although on an inclined shaft, always presents a central appearance, whereby the symmetry of the lamp is not marred, as would be the case with thumb-heads of different shape. The tube L extends above the reservoir, but not quite up to the wheel K′, thus making an allowance for longigitudinal play for the shaft *k*, whereby the bevel-wheel K′ may be moved into gear with the bevel-wheel K, or out of gear with it, so that the gear K will clear the gear K′ when the burner is unscrewed. A spring, *l*′, on the tube L serves to keep the wheel K in gear with its fellow. The friction between the knob M and the lower end of the tube L, caused by the spring *l*′, serves to prevent casual turning of the shaft *k*.

Operation: The lamp is removed from its bearings and the wicks are ignited. The operator, after adjusting the wicks to about the proper height, secures the lamp in its seat, and while the flame is assuming its full proportions, regulates the same by turning the

knob M either back or forward until the flame has assumed its proper dimensions.

In case of wicks becoming permanently clogged the parts for moving the wicks are, with ordinary lamp-adjusters, in danger of being overstrained and made unfit for further use, but with my construction any such strain has the effect of pushing the wheel K′ down and out of gear with the wheel K, and thus danger of breakage is avoided.

When the top part of the reservoir is to be unfastened or reinserted the wheel K′ is, by pulling the knob M down, moved out of the range of the wheel K. It is seen that the separation or connection between the knob M and the spur-wheels J′ may be effected immediately.

I am aware that lamp-wicks are operated by central knobs under the reservoir; but the connections in such cases are rigid, and the transmission of motion is exceedingly slow, so as to render their operation tedious and slow, and the nicety required in the fit between the parts is such as to make the adjusters very costly. Such nice fitting of parts is wholly avoided in my adjuster, by reason of the spring *l′* serving to keep the bevel-wheels in proper gearing position.

Having described my invention, what I claim, and desire to secure by Letters Patent, is—

The combination of the wheel K, shaft *j*, carrying spur-wheels, wheel K′, the spring *l*, the tube L, and the shaft *k*, substantially as set forth.

Witness my hand in the matter of my application for a patent on a center-lamp for railroad-cars this 31st day of August, 1876.

JAMES L. HOWARD.

Witnesses:

ALBERT L. BURKE,

GEORGE C. BARNES.