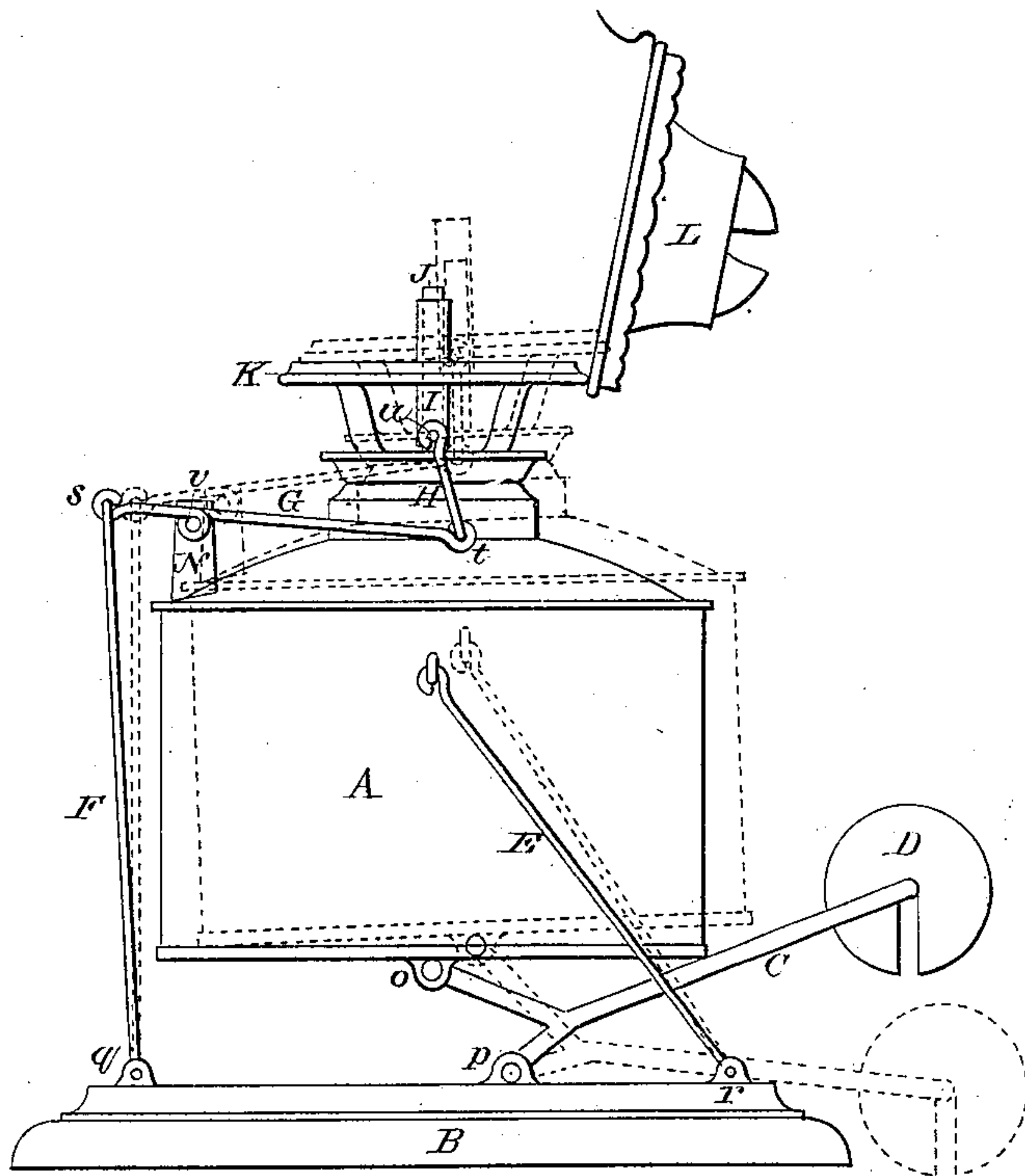


(No Model.)

W. SCOTT.  
LAMP.

No. 258,678.

Patented May 30, 1882.



WITNESSES.

INVENTOR.

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# UNITED STATES PATENT OFFICE.

WALTER SCOTT, OF HOOSICK FALLS, NEW YORK.

## LAMP.

SPECIFICATION forming part of Letters Patent No. 258,678, dated May 30, 1882.

Application filed March 30, 1882. (No model.)

*To all whom it may concern:*

Be it known that I, WALTER SCOTT, of the village of Hoosick Falls, in the county of Rensselaer and State of New York, have invented a new and useful Improvement in Lamps; and I hereby declare the following to be a full, clear, and accurate description of the operation and construction of the same, reference being had to the accompanying drawing, making a part of this specification.

To enable others skilled in the art to make and use my invention, I will proceed to describe the same with reference to the drawing, which is an elevation of my improved lamp.

The nature and object of my invention is to construct a lamp to burn oil or other fluids which, when once lighted, will burn a predetermined specified time, and then automatically extinguish itself without the interference of an attendant; and, further, to be so arranged as to extinguish itself before the oil or other fluid is all consumed, thereby preventing the wick from getting dry, so the lamp can be relighted without wasting the wick, or requiring unnecessary trimming.

In the drawing, B represents the top of the post, shelf, or other support of the lamp; *r*, the plate which supports the other portions of the lamp in order to make the lamp removable from the post or shelf; A, the oil-receptacle of the lamp; H, the screw-threaded ring or opening which receives the burner which holds the wick, and also the dome which supports the chimney and a part of the mechanism which extinguishes the flame.

To the support-plate, at *r*, is hinged a rod, E, which extends diagonally upward, and is hinged to the oil-receptacle A at any convenient place to preserve the perpendicular position of the receptacle; and to make the receptacle still more stable in its position another rod may be used on the opposite side of the oil-receptacle, hinged in the same way and parallel to rod E. On the plate, toward its center, is pivoted, at *p*, one or more rods, C, which extend back far enough to receive the weight D, and this lever is made in two parts or bifurcated, and extends forward and upward, and is hinged to the bottom of the oil-receptacle A at *o*; or the end of the lever C can be turned up so as to press against the

bottom of the oil-receptacle. Thus the oil-receptacle is supported by the hinged lever C and rod or rods E. When the oil in the receptacle is sufficient in weight to overcome the weight D the receptacle, lever, weight, and other parts will assume the position shown in the drawing in full lines. When the oil has been so far consumed that the weight D on the lever C is greater than the weight of the receptacle and the oil therein contained, the parts will assume the position shown in the drawing in dotted lines.

On the plate opposite *r*, at *q*, is hinged the rod F. To the upper end of the rod F, at S, is hinged the arm G, which is also pivoted to a projection, N, which is fastened to the top of the receptacle, thus forming a lever of the first order, whose fulcrum is on projection N.

At the end of the arm G, at *t*, is hinged an arm, which extends upward, and at its upper end is hinged to a stud, *u*, which is fast to and projects from a slide or tube, I, which encompasses the wick-tube J and slides thereon. Instead of the hinged arm extending upward from the arm G, the arm G may be made longer and bent upward to strike a bent rod which is connected to two wings—one on each side of the wick-tube—and hinged at their lower ends to the wick-tube.

When the oil becomes so low in the receptacle that the weight D on its lever overcomes the weight of the oil and the receptacle the parts assume the position shown in dotted lines, and the slide I is forced up over the top of the wick-tube J, thus extinguishing the flame of the lamp. When the wings are used they will be closed over the wick-tube, and thus extinguish the flame. When the weight of the receptacle and the oil therein preponderates the parts will assume the position shown in full lines—the slide will be drawn down; or in the other construction the wings will open to allow the flame to burn when the wick is lighted.

K is the disk through which the wick-tube passes, and L is the dome which supports the chimney, and through which the flame ascends.

The apparatus for extinguishing the flame—that is, the sliding tube or the wings which shut over the wick-tube—are well-known devices, and I do not confine myself to these ar-



rangements, as the flame may be extinguished in many ways—for example, by an extinguisher hinged to one side of the wick-tube, or by a device for withdrawing the wick partially from the wick-tube. There is another modification of the devices hereinbefore described, which may be used and which will secure the same result, namely: The rod, the arm G, and its support or fulcrum N may be placed on the opposite side of the lamp to that shown in the drawings—that is, on the same side with the weight—and the rod F hinged at its upper end to arm G, as before, and its lower end connected to lever C, instead of being hinged to the plate at q, the connection with lever C being made by a hook formed on the lower end of rod F, which hooks over the lever C.

It is plain that the oil-receptacle should be made of sufficient capacity to hold illuminating material enough to last longer than one night, or longer than one space of time predetermined upon for it to burn. Otherwise the oil or other material would all be consumed, and the wick would burn dry and injure both the wick and the burner, and the benefit of the apparatus be lost. Beyond this limit the receptacle can be made of any size, the amount of the poising-weight being made with reference thereto.

The counterpoising-weight may be made in as many sections as desired. For example, if it is required to burn the light for a certain number of hours each night, say, for six nights, the wick can be lighted, the receptacle being full of oil and the weight being adjusted to counterbalance the weight of a certain portion of the oil. When the surplus over and above this portion is consumed the weight will drop and the flame will be extinguished, and then by removing the requisite amount of the weight each night thereafter the desired time of its burning will be accomplished without the addition of more oil, thus saving the carrying of oil for a week; or, if preferred, an ordinary scale-beam can be used with weight to slide thereon.

I do not confine myself to the use of the weighted lever and its connections for actu-

ing the device for extinguishing the flame, as it is plain the same result can be accomplished by using as a support to the oil-receptacle a variable spring whose tension can be so adjusted as to overcome the weight of the receptacle and the oil therein at predetermined intervals.

I am aware that lamps have been heretofore used which will automatically extinguish themselves at a predetermined time; but I am not aware of any having been constructed where the relative weight of the illuminating material to a counterpoise weight or spring has been utilized for this purpose. Of course, when only one constant weight is used with one constant amount of leverage, or when a non-adjustable spring is used, a certain and sufficient portion of oil must be added after the lamp has extinguished itself for each succeeding interval the lamp is required to burn, the amount of this portion of oil to be added being dependent on the length of time it is desired to burn it.

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

1. In an automatically-extinguishing lamp, the combination of an oil-receptacle with a counterpoise-weight or its equivalent connected by mechanism to the extinguisher near the flame, whereby the movement of receptacle after a certain amount of illuminating material has been consumed actuates the extinguisher and quenches the light or flame, substantially as and for the purpose set forth.

2. In an automatically-extinguishing lamp, a receptacle for the illuminating material, supported on a pivot and connected by suitable mechanism to an extinguishing device, combined with a counterpoise or balance adjustable at will, whereby the time at which the extinguisher shall quench the flame may be predetermined.

WALTER SCOTT.

Witnesses:

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EDMUND C. STROUD.